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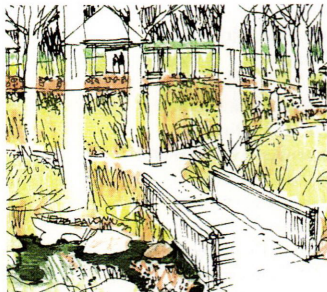
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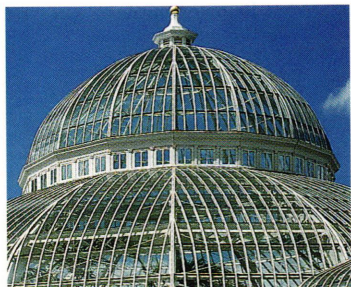
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Paul Madson & Associates, Ltd.

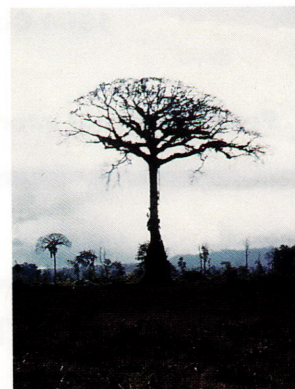
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28. In focus with Rafferty Rafferty Tollefson



34. Saving the Rain Forest

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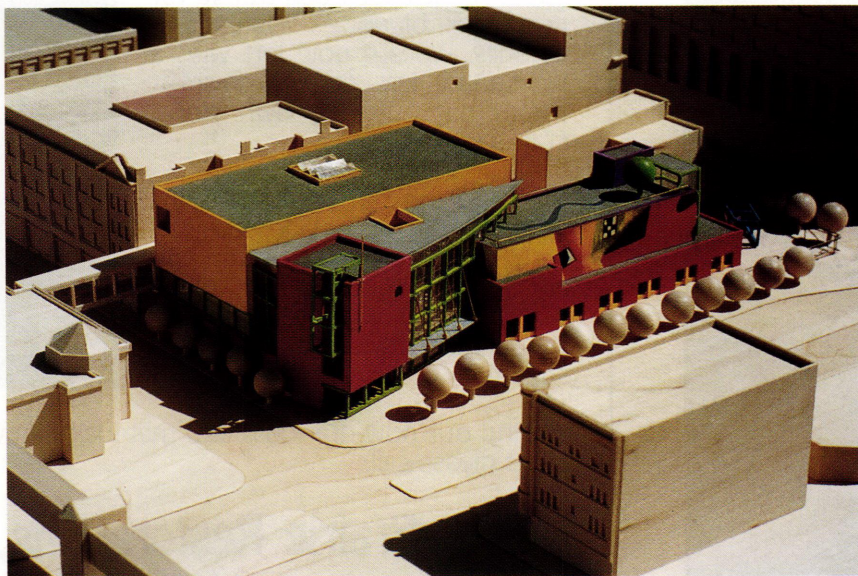
AM

sketches

A new **C**hildren's **M**useum

Downtown St. Paul will have a "treasure chest of activities" when the new Minnesota Children's Museum is completed in the fall of 1995. Located at the corner of Seventh and Wabasha streets, the 3-story, 62,000-square-foot facility,

designed by the collaborative team of James/Snow Architects and The Alliance Architects, both of Min-



neapolis, will be sheathed in red and yellow brick, inspired by the historic buildings of the city's Lowertown district. Expanses of glass will expose all three levels of the lobby. An entrance canopy will be suspended

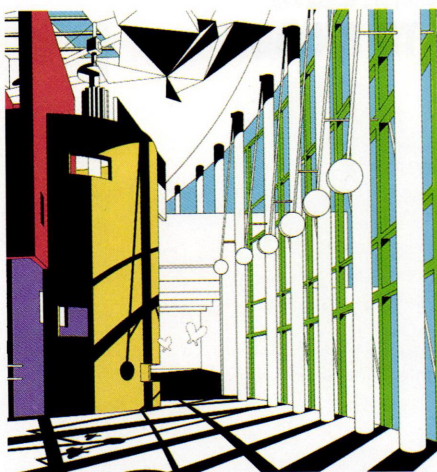
from yo-yo-like structural elements, and "urban animals" will march along the top of a fence enclosing a courtyard along St. Peter Street.

Design features include four permanent galleries, a 150-seat theater, a museum store, classrooms, two discovery centers within the galleries and an activity center. Of special note are a 3rd-level rooftop garden; a "moon window," which mechanically tracks lunar phases; a lobby mural; and an exterior mural facing Seventh Street.

Vince James of James/Snow Architects calls the building a "playful assembly of colored blocks." These colored

blocks will be sheathed in red and yellow brick, inspired by the historic buildings of the city's Lowertown district. Expanses of glass will expose all three levels of the lobby. An entrance canopy will be suspended

The \$11.5 million building approximately triples the square footage of the museum's current home at Bandana Square in St. Paul. The museum is one of the nation's top 10 children's museums, recording more than 2 million visitors since its establishment in 1979. The new facility is expected to accommodate up to 500,000 annual visitors. Ground-breaking is slated for spring 1994.



When completed in 1995, the Children's Museum will be a playful collection of forms and colors (top). High lobby windows (above) will orient the interior to the outside.

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Too young to designate ... too old to award



From Louis Sullivan's credo that form follows function, to Mies van der Rohe's "Less is more" to Robert Venturi's "Less is a bore," professional attitudes toward buildings are changing constantly.

Nowhere are these changing attitudes more evident than in this 1969 skyway, which won both local and national AIA Honor Awards. *Architectural Record* quoted national jurors as saying that it was "not only worthy of celebration, but one hopes worthy of emulation as a prototype."

Designed by The Cerny Associates, the skyway has, indeed, become a prototype. Its straightforward steel-and-glass design contributed to the development of Minneapolis's second-level retail arena.

The jury said nothing, however, about the skyway's impact on its host building, the former First National Bank building and one of the region's best examples of Egyptian Revival architecture. No doubt both the Minneapolis Heritage Preservation Commission and the National Register of Historic Places would agree about the building's architectural merits—if it didn't have a skyway slapped onto its façade.

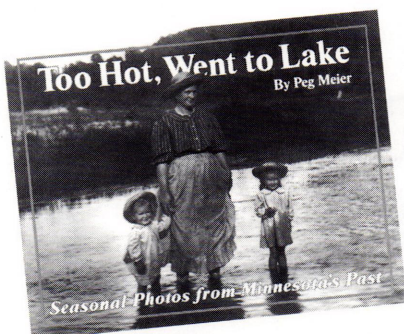
So how will we evaluate this skyway and others in the future? Should we honor structures that have a negative impact on significant buildings? Or should they be denigrated as being insensitive to context and to the historic buildings they damage? More important, will this decision be based on some underlying architectural ethic or on the whims of then-current design trends?

Robert C. Mack, FAIA

Hot off the presses

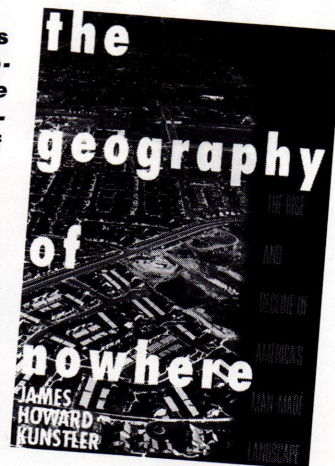
Too Hot, *Went to Lake*, by Peg Meier, is like an old family photo album, full of nostalgic snippets from years gone by. Meier has collected more than 300 black-and-white historic photos that chronicle Minnesota's love affair with the four seasons. Through blinding blizzards and blistering heat waves, Minnesotans are always outside, braving and embracing the elements. Sunday picnics in the park, an ice-skating party in 1912, hunting trips in the 1880s, a turn-of-the-century Christmas pageant, a mock "womanless wedding" in 1927, a tornado barreling down on St. Paul in 1890 and Hubert Humphrey showering at the health club in 1946 are among the book's historic scenes. Although narration and captions clue us in on many of the photos, some images remain mysteries. The author invites readers to help identify the unknown—perhaps a bit of your own family history.

Peg Meier is a reporter for the *Star Tribune* in Minneapolis. She has written four other Minnesota-inspired books. *Too Hot, Went to Lake* is published by Neighbors Publishing, P.O. Box 15071, Minneapolis, Minn. 55415, (612) 822-5418.



James Howard Kunstler's *The Geography of Nowhere: The Rise and Decline of America's Man-Made Landscape*, traces the fall of America's urban neighborhoods as suburban communities began to swallow up the rural landscape after World War II. Kunstler's book is an indictment against the strip malls, tract-home developments, freeways and roadside fast-food joints that have created a disorienting sense of placelessness on our landscape. Nearly 80 percent of everything built in

America was constructed after WW II, and that 80 percent is hardly something of which to be proud, the author argues. Kunstler profiles three cities—Detroit, Portland and Los Angeles—to illustrate the problems of unrestricted suburban growth and to suggest possible solutions. Kunstler is the author of eight novels, and has worked as a newspaper reporter and as an editor for *Rolling Stone* magazine. He is a contributor to the *New York Times Sunday Magazine*. *The Geography of Nowhere* is published by Simon & Schuster, New York.



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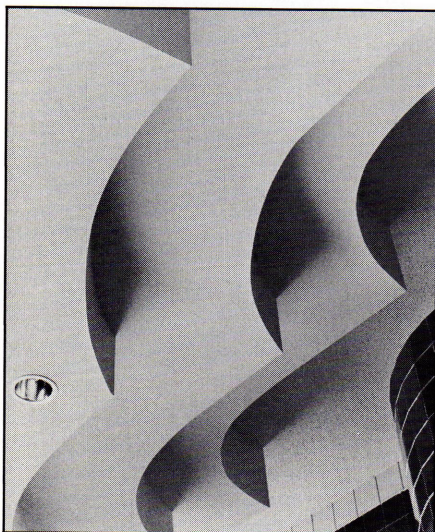
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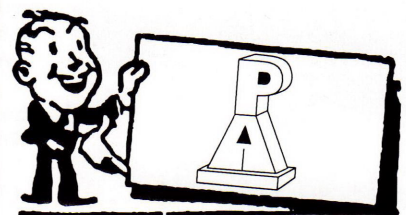
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Architecture Minnesota recently spoke with Jim Giefer, a registered engineer and principal with Gausman & Moore Associates, Inc., about energy efficiency and the support engineers provide to the architectural design team. Gausman & Moore, a regional mechanical, electrical and lighting-design firm, employs 58 engineers, technicians and support staff. The firm's clients include some of Minnesota's leading architectural firms.

How do engineers support the effort to design sustainable buildings? How great is the need for collaboration between architects and engineers?

Engineers must understand the goals of the architectural design team and its aspirations for the project. ... Consulting engineers bring specialized knowledge to the design team. For instance, when an architect wants to bring the outdoors inside with expanses of glass, we can help position the building to take advantage of sun-

light and minimize seasonal extremes. Engineers also can recommend energy specifications for glass and calculate the efficiencies of other measures like shading and overhangs. When new construction includes solar or wind power, we can help integrate the system to become an architectural attribute.

Collaboration should also go beyond the architects and engineers to include the building's owners, the utility company, and even the construction manager.

What are the standard and emerging practices of energy-efficient design? Where are today's architects and engineers in terms of innovations—in convincing owners to include alternative means of providing energy to their facilities?

Energy standards, at a minimum, are found in state building codes.

Fortunately, there is a natural tendency among architects and engineers to encourage the efficient use of natural resources. Most of us typically go beyond the codes to create even higher standards for energy use. This, of course, involves client consultation and consensus. Most clients are quite willing to agree with our recommendations, especially when they own and occupy their buildings.

Emerging energy practices include new techniques for heating and cooling, like ground-coupled heat pump systems. And as the cost of energy goes up and the cost of new technology goes down, "zero fuel" power generation will become a more practical choice. These alternative energy sources, more commonly found on the east and west coasts, include wind and photovoltaic power.

Highly efficient buildings are more expensive to design and construct than less efficient buildings. Engineers argue life-cycle savings, but how do you project savings when future energy costs are unpredictable?

Inefficient buildings do cost less, at least initially. But today's products—electronic ballasts, lamps, motors—are so cost effective that their added expense will provide payback for the building in just three to four years.

Life-cycle projections are useful in measuring and promoting energy-efficient systems. Although the cost savings are not 100 percent predictable, we do know what happened with the oil crisis of the 1970s. A look at history and worldwide events beyond our control shows that energy costs can rise mightily. Prices are momentarily stable only because OPEC is weak and the United States has reduced substantially its per capita energy consumption. But, because fossil fuels are finite, it is safe to say that the cost of traditional energy sources will only go up.

Take a look at large power companies. They are aggressively selling oil, gas and electricity to underwrite the development of photovoltaic and wind-power technology. These companies are exceeding government mandates for energy conservation projects because they want to be prepared for the future.

Combined with the economic and environmental realities, as well as the incentives offered by power companies, there is simply no good reason to design buildings at the low-end of efficiency.



Shin and Joel Koyama

Ankeny, Kell, Richter, Walsh Architects with The Stubbins Associates worked with Gausman & Moore on University Center Rochester, a 140,000-square-foot renovation and addition, to produce a sustainable campus by integrating the architecture with mechanical and electrical systems.

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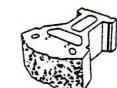
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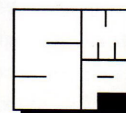


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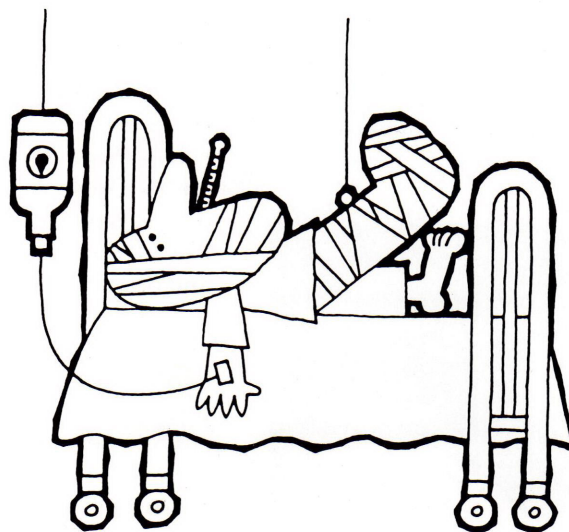
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**Bronze Sculpture
by Stanton Sears
Chine colle on Silk
by Lynn Klein
Carolyn Ruff Gallery
Minneapolis
Feb. 26-April 2**

Site-specific public artist Stanton Sears is best known locally for his collaborative work on the Minnesota Vietnam Veterans Memorial in St. Paul, stone benches on Nicollet Mall and a bronze bench on Hennepin Avenue. This exhibit will demonstrate the flexibility and playfulness of his art. In addition, Lynn Klein of Berkeley, Calif., presents resist-dyed photographs on silk, combining her expertise in drawing, printing, photography and textile art.

For more information, call (612) 338-8052.

**Opening Exhibits
Frederick R. Weisman
Art Museum
U of Minnesota
Minneapolis Campus
Through March 6**

Three exhibits highlight the opening of the new Frederick R. Weisman Art Museum. Portions of the museum's permanent collection are displayed in *A New View: The Collections of the University of Minnesota*. Augmenting this is *Works from the Frederick R. Weisman Art Foundation*. This contains contemporary pieces, many of which will be donated to the museum. In addition, *An Architect's Eye* features work by artists who have influenced Frank Gehry, who also designed a portion of the opening show.

For more information, call (612) 625-9678 or (612) 588-0728.

**Classics in Teak:
The Golden Age of Postwar
Danish Furniture Design
International Design Center
Minneapolis
March 17-April 17**

This exhibit includes examples of furniture from the 1950s and '60s.

**The American Moderne: 1920-1940
Norwest Center
Minneapolis
Through Summer 1994**

Norwest Corporation has one of the largest and most impressive art collections in corporate America as it focuses on 20th-century decorative and industrial arts. A series of lobby display cases allows employees, bank customers and the public to enjoy the pieces. Pulled from the bank's extensive collection, the objects in this latest installation—the fifth exhibit since the bank moved to its new downtown-Minneapolis home in the late 1980s—focuses on the '20s and '30s. Highlights include Walter Dorwin Teague's "Nocturne" radio from 1937, Norman Bel Geddes's stainless-steel "skyscraper" shaker and "Manhattan" serving tray of 1934, and John Vassos's aluminum "RCA Victor Special" portable phonograph of 1935.

For more information, call the Norwest arts program at (612) 667-2112.

Such designers as Hans Wegner, Borge Mogensen and Finn Juhl will be featured, representative of a period when Denmark received extensive international attention for its innovative design. Also scheduled is a lecture, "The Romance of the North: Scandinavia's Conquest of the Postwar American Market," on Sunday, March 20, presented by University of St. Thomas design historian Clair Selkurt.

For more information, call (612) 341-3441.

**Distant Visions
AIA Gallery
Washington, D.C.
Through March 31**

New Zealand-born painter Peter Waddell showcases 10 of his paintings depicting the architectural history of Washington, D.C. Subject matter covers the familiar and the

mysterious as highlights include a trio of paintings entitled "Dolly Madison's Dream." Waddell is noted in New Zealand for his architectural paintings, and he was particularly inspired by the classicism of the U.S. capital. The exhibit is sponsored by the American Architectural Foundation.

For more information, call (202) 638-3221.

**Daniel Libeskind
and the Jewish Museum in Berlin
The Art Institute of Chicago
Through May 1**

This exhibit features drawings and models of Daniel Libeskind's first major commission, the 1989 design for an addition to the Berlin Museum to house exhibitions of artifacts related to Jewish history of Berlin.

For more information, call (312) 443-3600.

AM

The spaces between

By Bette Hammel

“ approach my work more as an art rather than as a business,” says landscape architect Herb Baldwin.

Many Twin City architects say Baldwin is a delight to work with, someone whose touch ignites a spark in the design process. The soft-spoken designer has built his reputation through 34 years of landscape design for private and public clients, including 23 years of teaching at the University of Minnesota’s College of Architecture and Landscape Architecture.

While working independently as a one-man shop in Jordan, Minn., Baldwin often collaborates with other designers and architects, and forms crews of experts to complete a project. In a recent collaboration with Minneapolis architect James Stageberg, Baldwin designed the grounds for an interpretive center at Gustavus Adolphus College in St. Peter, Minn.

“We wanted to preserve the Scandinavian heritage of the place,” Baldwin says. “Stageberg took the idea of using a ship form for the [interpretive center] and made it a delightful architectural space. The grounds, which spill out from there, are composed of a series of little garden vignettes.”

In another Gustavus project, Baldwin created a prairie overlook using a rock formation. As with Gustavus Adolphus, many of his clients hire him for repeat work.

Baldwin’s collaborations with architects have led to a series of winning designs. He lists such Twin Cities architects as Tom Meyer of Meyer, Scherer & Rockcastle, John Cuninghame of Cuninghame Hamilton Quiter, James Stageberg and



Courtesy Herb Baldwin

Ralph Rapson among his favorite architects with whom to work, citing their “sense of humor, commitment to their art, nurturing of an idea, and honesty and humility.”

Meyer replies succinctly, “Herb makes things that are beautiful.”

And he often does that with a design palette expressed from the natural surroundings of rocks, prairies and woods. Colleagues say he works artistically with nature, not against it. For the MS&R-designed Von Blon house in a western Minneapolis suburb, for instance, Baldwin allowed prairie grasses to dominate the site while also designing a fieldstone embankment for a pond.

For Kingsley and Catherine Murphy of Minnetonka, Baldwin entered the picture when the home owners grew concerned about a decaying barn on their property. Located across the street from the Minnetonka Center for the Arts, the barn proved a ready subject to artists who were inspired by its weathered beauty. But after agreeing that there was no hope saving the structure, Baldwin suggested that they think of it as an exposed ruin. Using rocks from the fields and rescued parts of the barn masonry, he composed an artistic form set off with prairie grasses.

Among Baldwin’s favorite landscapes are old orchards. “The orchard landscape is a statement of what is and is not there,” he writes. “The vacant spaces are as real as the trees standing. For me, it is a symbol of what we need to know, in order to preserve, to renew and to reform. It offers us a glimpse or reflection of how well we are doing to restore the natural ecosystem.”

“It is that void in the orchard where the whole idea of design becomes stimulatingly tangible,” Baldwin further writes.

**For landscape
architect Herb Baldwin,
the natural landscape
is a fragile and
beautiful environment
that must be
preserved, renewed
and reformed**



"Design is a serious matter of proportion and margins. Often it is the silence of space that is appropriate. I approach design in a painterly way. It is a question of what is needed or what should I take away."

Baldwin emphasizes that the landscape architect is a custodian of the natural environment.

The buzz phrase around the design community today is "sustainable design," but Baldwin says this is really an old concept.

"The recent rush to label a 'sustainable landscape' is not a new concept, but a repopularized phrase and is tacitly obvious," Baldwin explains. "For me, the design of the landscape is the making of spaces. If it is plant material that shapes the space, I select material that grows in the region where it will be planted and maintained."

Each plant in a landscape is important to Baldwin. "A woods is like a family," he says. "If you remove one member—even though that family is a collection of

strong individuals—the removal of that one member weakens the others. And the result is often not realized for maybe five or 10 years."

When Baldwin and his crew work on a driveway or road, for example, they try to build across the root system of existing plants to avoid severely affecting the roots.

Part of Baldwin's extensive resume involves municipal work throughout the Midwest. For White Bear Lake, a St. Paul suburb, he is designing a master plan for a portion of the central business district. For LeSeur, Minn., he has begun an image and streetscape study. Past assignments have included work for the cities of Mason City, Sioux Falls, Bismark, St. Cloud, Minneapolis and St. Paul.

For Baldwin, landscape architecture has its natural pleasures. Viewing his profession, he says, "how fortunate the landscape architect is to work the positive side of growth, the becoming of a space."

Bette Hammel is a Twin Cities writer who frequently contributes to Architecture Minnesota.

Herb Baldwin's landscapes include this South Minneapolis Green Garden with Herm (opposite); the Grace B. Dayton Woodland Wildflower Garden at the Minnesota Landscape Arboretum (above); and the Eckman Mall next to Christ Chapel at Gustavus Adolphus College (below).





**U.S. Department of Agriculture
Northern Crop Research Center, Fargo, ND**

"We wanted...(the structure) to tie into other buildings at the University, so we used a color of brick found on the adjacent structure, plus two other colors predominant on campus. The patterning of the brick draws from the Scandinavian tradition of enlivening utilitarian structures with color and pattern, creating visual interest during the long northern winters."

– Loren Ahles, AIA, Project Designer
– Hammel, Green and Abrahamson, Inc., Minneapolis
Photography: Tom Hlavaty



Burnsville Marketplace – Burnsville, MN

"Brick was chosen as the primary facing material...for all the long established, practical advantages; durability, low maintenance and cost effectiveness. Equally important...were the major aesthetic benefits...Brick was consistent with the surrounding context. The inherent design flexibility of unit masonry coupled with the available ranges of color and texture ensured us that Burnsville Marketplace would indeed age with interest."

– John Gould, AIA, Director of Design
– KKE Architects, Inc., Minneapolis
Photography: Lea Babcock



Warroad Public Library – Warroad, Minnesota

"We selected brick for this project both to emphasize the horizontality of the design and to root the building firmly into its site. Brick connotes permanence and stability, while its modular form gives pattern to otherwise unrelieved surfaces."

– Sarah Susanka, AIA – Mulfinger, Susanka & Mahady Architects
Photography: Peter Kerze

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**MINNESOTA
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In *The Geography of Nowhere*, James Howard Kunstler turns a critical eye to suburban growth and concludes that all those strip malls, tract-house developments, fast-food joints, spaghetti-junction highways and office parks surrounded by parking lots have created a spiritless, placeless world.

"Eighty percent of everything ever built in America has been built in the last 50 years, and most of it is depressing, brutal, ugly, unhealthy, and spiritually degrading," Kunstler writes.

Well, we've heard that criticism before. *The Geography of Nowhere* tramples over familiar turf without offering fresh solutions to the problem. Sure, the suburbs are amorphous. Sure, they're sucking up farmland. Sure, they're wasting tax dollars on new infrastructure while the traditional urban cores deteriorate. And, oh yes, cars do rule while pedestrians are relegated to second-class citizenship.

Sustainable edge

Yet a lot of us grew up in the suburbs and most of us turned out just fine, despite our spiritless, placeless surroundings. In fact, many suburban-raised adults are choosing to stay in suburbia and start their own families. Apparently a lot of people think the sprawling, disjointed wasteland of suburbia is an ideal place to live—highways, parking lots, strip malls and all.

Suburbs—and the prospering business hubs coined "edge cities"—are here to stay. And so are cars. Cars revolutionized civilization at the turn of the century, and our perspective of urban design has to change accordingly. Paris was built in a pedestrian, car-less world. Los Angeles was built at the beginning of the automobile revolution. That's why the two cities look so different.

That's also why we need to rethink the traditional concept of city. After all, many suburbs surrounding such cities as New York, Chicago, Philadelphia and Los Angeles are assuming traditional "city" characteristics as they become more densely populated. High-rise apartment buildings and town houses are sprouting up to accommodate changing suburban demographics that include greater ethnic, social and economic diversity.

Edge cities are thriving. The edge city around Irvine, Calif., between Los Angeles and San Diego, is booming with 239,965 jobs. The Schaumburg area outside Chicago supplies 193,396 jobs. About 141,651 people work in the area around O'Hare Airport, and 135,855 make a living in the King of Prussia/Route 202 region of Pennsylvania. Compare those figures to the work forces in downtown Atlanta with 99,688 jobs and Minneapolis with 98,484.

The new downtowns are found in a labyrinth of suburban office parks connected to freeways. Like traditional downtowns, edge cities are, indeed, real cities—they're just a new form of city. They have jobs, shopping, entertainment, housing and skyscrapers.

They don't have heart and soul.

In this issue, we look at sustainable design to discover solutions for improving our built environment while saving our planet. Suburban sprawl wastes natural resources with its reliance on cars—yet we don't need to blow up all those highways and return to the horse-and-buggy era to save the planet. We need the creative energy of designers, business leaders, politicians and citizens working together to build a sustainable culture in which technological and economic growth can coexist with nature to create a real sense of place. Let's find ways to raise the human spirit in the placeless world of shopping malls. The great urban experience of tomorrow may be a hybrid of yesterday's Paris with today's edge city.

Nine projects received 1993 AIA Minnesota Honor Awards.

Submissions were judged by **Leslie Gill**, a founding partner of

Bausman-Gill Associates in New York; **Richard C. Keating**, design partner with Keating Mann Jernigan & Rottet in Los Angeles; and **Lawrence W. Speck**, dean of the architecture school at the University of Texas at Austin and principal of Lawrence W. Speck Associates, Inc.



Schall Residence

Edina, Minn., Meyer, Scherer & Rockcastle, Ltd.
(To be published May/June 1994)



Minnesota History Center

St. Paul, Minn., Hammel Green and Abrahamson, Inc.
(Published Nov./Dec. 1992)



Loken Residence

Duluth, Minn., Salmela Fosdick, Ltd.
(To be published May/June 1994)



Pillsbury Conservatory *Orono, Minn., Meyer, Scherer & Rockcastle, Ltd.* This 200-square-foot orchid conservatory overlooking Lake Minnetonka shows that great things often arrive in small packages.

The clients, who live in a white 1950s wood-clad house, are avid orchid growers who asked for a separate plant room that connects with a remodeled first-floor master bedroom.

The conservatory easily moves from inside to outside, creating a visual and physical link to the outdoors. Flowing water humidifies the air as it travels along a bronze and granite channel toward the exterior garden. The channel becomes a fountain that spills onto a hollow stone. Bronze plates, cut into wood and stone, serve as connectors and decorative elements for both the fountain and structure itself. Rafters extend the building into the garden, and painted-aluminum screens frame colored-glass inserts, adding decorative punch to the windows and door.



Lea Babcock

Strong forms and crafted details come into play in this orchid conservatory in Orono, Minn.





Terry Wilkinson

DPS Creative Minneapolis, Minn., *Ellerbe Becket*. The offices for DPS Creative, a graphic-design studio, are a low-budget affair that offers plenty of visual flair.

DPS began as a printing broker and has evolved into a full-service design studio. The client called for 3,400 square feet of space for expanded offices, a reception and gallery area, conference room, lounge and lunch room, and dark room.

Working on a \$15 per-square-foot budget, the architects relied on such utilitarian materials as plywood, galvanized-corrugated metal, perforated steel and pegboard to fashion a raw, unfinished aesthetic. The new space expresses the studio's evolution. The curved conference-room wall, for instance, recalls the printing drum while a painted reception floor reflects spilled printing inks.

Management offices, which line one wall, are open to the main gallery to foster communication and interaction between the entire staff. The gallery, which can display both completed and in-progress work, leads to the design stations toward the back.

The honor-awards jurors praised the studio for being "visually exciting" and evoking energy on a limited budget.



A painted lobby floor (opposite) recalls the graphic-design studio's days as a printer, while such low-cost, industrial materials as plywood, perforated metal and pegboard form the reception desk, office cubicles and conference room.

The Como Park Conservatory Restoration *St. Paul, Minn., Winsor/Faricy Architects.*

The Como Park Conservatory, built in 1914 and now on the National Register of Historic Places, houses continuously changing floral displays as well as more than 200 permanently planted species, 2,000 to 5,000 flowering plants and 44 palm species. Inspired by London's Crystal Palace, the Conserva-



Brian Droege

tory is one of the few remaining Victorian greenhouses in the country. Winsor/Faricy's recent renovation will ensure the Conservatory's continued existence.

The restoration progressed in several phases. The architects replaced the mechanical and electrical systems and installed new ventilation systems in all display and growing houses. Much of

the structural frame—originally constructed of steel frame, wood trim, wood sash and the like—needed repair or replacement. Work on the steel frame included sandblasting and refinishing with a special coating.

In addition, the architects replaced the glazing system on both the north and south houses, as well as removed wood cornices, pilasters, sashes and all trim, and installed aluminum and fiberglass-reinforced concrete. For the main Palm House, Winsor/Faricy slipped on a new skylight system complete with curved, laminated safety glass. A new 30,000-square-foot support facility behind the Conservatory houses garages, potting areas, a cooler and growing houses.





Winsor/Faricy Architects of St. Paul restored the Como Park Conservatory to its former glory by repairing or replacing much of its structural framing and glass.





The St. Paul Companies Interior Renovation

St. Paul, Minn., The Alliance Architects.

The renovation of the existing 5-story St. Paul Companies Building in downtown St. Paul seamlessly blends old with new. Across the street to the north is the insurance company's new high rise, connected by skyway to the old building. The Alliance needed to create a remodeled interior that is compatible but not imitative of the new building's interior detailing.

Because the original full-block building is actually four separate structures interconnected over time, interior circulation ran along an array of corridors. The architects adjusted the circulation with a central internal street that links up with the skyway to the new tower. From this corridor, office tenants have access to parking as well as to such other corporate functions as the training and executive-education center, library, meeting rooms and elevators to upper-level offices. A rotating art collection is displayed in lit alcoves.

With circulation in place, the architects then carved a 2-story lobby that helps orient pedestrians and serves as an entrance to the ground-floor training facility. Second-level windows illuminate the lobby while a back-lit screen helps diffuse the light evenly. Artificial light creates a warm glow from behind the screen in the evening.



A central circulation spine (above right) leads from the skyway to the renovated space, which includes an education center (above). A back-lit screen (opposite) diffuses light into the lobby.

George Heinrich





Mille Lacs and Lake Lena Ceremonial Buildings

Vineland and Hinckley, Minn., Cunningham Hamilton Quiter, P.A. Architects. Nature and religion are closely aligned in the diverse Native American cultures. This alignment with nature—reflected in indigenous materials and such shapes as the circle or octagon—is reflected in Native American architecture.

For the Mille Lacs Band of Ojibwe, Cunningham Hamilton Quiter of Minneapolis designed two separate ceremonial buildings for the tribe's religious rituals and celebrations.

The Mille Lacs Ceremonial Building near Vineland, Minn., sits atop a small hill overlooking the tribe's old ceremonial site. Oriented on a north-south axis, the building presents a traditional octagon-shaped ceremonial space set within in square floor plate that contains support areas for a kitchen, restrooms and storage. At the Lake Lena Ceremonial Building east of Hinckley, Minn., the octagon-shaped ceremonial space is set within an octagon floor plate for support facilities. The north-south entries mark the "people path" while the east-west entries note the "spirit path." Because drums are an important component of many Ojibwe ceremonies, a "drum warmer" is located outside each building's main entrance.

For each building, logs form the walls, cedar shake shingles the roofs and maple planks the floors. The light fixtures recall bird figures that decorate Ojibwe ceremonial drums and robes.



Christian Korab

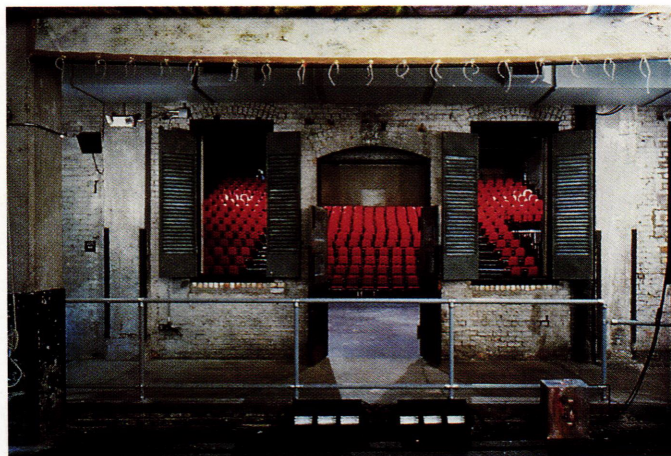
The ceremonial buildings at Vineland and Hinckley, Minn., reflect Native American culture. Exposed dirt at the Lake Lena building (opposite) near Hinckley forms an important component to Ojibwe ceremonial traditions. A "drum warmer" (below) is located at Lake Lena by the main entrance. The octagon shape of the Mille Lacs building (above) near Vineland reflects the Native American importance of the circle.



Erik Rusley



Exposed bricks and structural systems form the backdrop of the new Theatre de la Jeune Lune, carved out of an old cold-storage warehouse in downtown Minneapolis.



Ralph Berlovitz

Theatre de la Jeune Lune Minneapolis, Minn.,
BRW Elness Architects, Inc./Paul Madson & Associates, Ltd.

The Theatre de la Jeune Lune is carved out of four cold-storage buildings tied together by a Gothic-style red-brick façade, designed by Cass Gilbert in 1906. The 3- and 4-story buildings were built at different times and have varying floor levels, thus making connections between levels difficult for the restoring architects. But by gutting a portion of the complex and capping a new steel roof, the architects created workable theater and production facilities within the shell.

Yet a \$1.4 million budget inhibited prettying up the building, thus the gutted interior is true to its form—a gutted warehouse interior, warts and all.

The primary performance space accommodates 500 people with adjustable seating and risers that can be reconfigured according to stage-production needs. A secondary performance space is adjacent to the main stage; it works independently or in conjunction with the main stage. And a former loading dock and alley now serve as the entrance lobby. Out of audience view are offices and rooms for administrative and production personnel, while those portions of the building not needed for theater functions continue to serve as cold storage.

Rafferty Rafferty Tollefson Architects, Inc. has built a lasting firm based on mutual respect, diverse talents and old-fashioned family values

By Susan Grossman

Family Affair



Don F. Wong

Rafferty Rafferty Tollefson principals include (clockwise, from lower left) Craig Rafferty, Albert (Chip) Lindeke, George Rafferty, Lee Tollefson and Richard Rafferty. The firm recently completed the Campus Center at St. John's University in Collegeville, Minn. (opposite).

George Rafferty says that by the time he reached high school he wanted to be an architect. Well, actually, he knew he wanted to be an artist. However, he also knew he did not want to lead the proverbial starving-in-the-garret artist's life.

"Architecture is something more challenging than art," George says. "It's the technique of putting things together."

George Rafferty, co-founder and CEO of Rafferty Rafferty Tollefson Architects, Inc. (RRT) in St. Paul, has been practicing his technique and teaching it to others since graduating from the University of Minnesota's architecture school in 1942. During the 50-plus years of his career, he has received dozens of accolades. The latest came in November 1993 when he was awarded the Gold Medal by AIA Minnesota.

The only difficult thing about receiving the award, he says, is that he can't cut the medal in half. That way, he could give part to his brother, founding partner and president of RRT, Richard Rafferty. (Together, with friend and colleague Frank Mikutowski, the two brothers formed Rafferty Rafferty Mikutowski more than 30 years ago.)

The Gold Medal is in recognition of lifetime achievement, service and leadership to the architectural pro-

fession. George is considered one of the region's foremost design architects and is nationally recognized for his religious architectural work.

His son, Craig Rafferty, vice president of RRT, says his father's presence serves as an inspiration to the rest of the 16-member firm.

"Young students see George and he still draws, he's still accessible," Craig says. "The key to our success is George and Richard. They enjoy what they are doing. They are active and enthusiastic."

George, six years older than Richard, was in college studying architecture while Richard was still in grade school. Regardless of their age differences, Richard says the two always got along as children and did things together.

"I really blame him for getting me into this business, because the ups and downs can be difficult," Richard laughs. "After leaving the service during World War II, I was looking for something to do and George was already an architect. It was not long before I became captivated, because this is such a great profession. I enjoy the challenges that come from designing and building something."

After finishing his undergraduate work from the University of Minnesota, George served as an instructor in the armed forces, then resumed his studies at Harvard's Graduate School of Design in 1950. While at Harvard, George studied with Walter Gropius, who later hired him to join a team of young architects called "The Architects Collaborative" in Boston. Richard completed his bachelor's degree in architecture from the University of Minnesota in 1951.





Rafferty Rafferty Tollefson's work covers a field of projects, including this remodeling and addition for the Eastern Heights Elementary School (top) in St. Paul; the Watersedge Office Building (above) in Roseville, Minn.; and the Biwabik Gazebo (right) in Biwabik, Minn.



By 1961, both George and Richard were architects with Ellerbe Becket in Minneapolis. Like many of their peers, the two accepted free-lance design projects in addition to their duties at the firm. Yet double duty became cumbersome.

"It was either one or the other, because our free-lance project, St. Jude's Catholic Church in Grand Rapids, Mich., demanded a lot of time," George says. "But we knew we could do this for ourselves."

St. Jude's Catholic Church, which launched their firm in 1961, earned them several awards over the years, including AIA Minnesota's 25 Year Award, as well as awards from the Guild of Religious Architecture and the National Liturgical Conference. St. Jude's, along with St. John the Evangelist Church in Hopkins, Minn., have been acclaimed for their power and influence in contemporary church architecture.

Over the years, George has continued to focus on the design side of the business while Richard crossed over to construction administration and other business-related aspects of architecture.

"It just happened that I started doing specs," Richard says. "I began spending less time on design and more time on business. Somebody had to do it, so I did."

While RRT is known for liturgical design, religious-based clients comprise only one-third of its work. Such academic clients as the Saturn School of Tomorrow in St. Paul account for another one-third, while a spectrum of clients, from residential to city zoos, completes the ticket. "We're known for our religious work," Craig



says, "but it's to our benefit to be generalized as well."

Lee Tollefson, a former classmate of Craig's at the University of Minnesota, joined RRT 10 years ago. As the firm's treasurer, he says, being generalized has helped RRT survive a spotty architectural economy.

"We work well together because we're small," Tollefson says. "We have 16 people who have general abilities. That makes our staff quite flexible. We're not departmentalized and we have open, integrated offices."

The only real office in the firm's St. Paul Lowertown operation is the conference room, which is covered with awards and features a brass monkey on a swing hanging from the ceiling.



For the U.S. Postal Service, the firm designed a colorful facility for the Dayton's Bluff Station (above) in St. Paul. For Courage Center (left), RRT pulled on rural imagery for a facility that includes administration, multipurpose and physical-therapy areas.



In addition, Tollefson continues, RRT works on sustaining long-term relationships with its clients. For example, the firm has a 20-year working relationship with Courage Center of Minnesota, having designed several of its facilities. St. John's University in Collegeville, Minn., is another ongoing client with more than 75 projects involving planning, remodeling or new construction over the past 10 years.

"Our strategy is three-fold," Craig says. "We try to maintain a steady, even flow of work. We pay attention to design and detail, and we practice thorough project management."

Despite the fact that four Rafferlys and two Tollefsons now are involved in the firm, relationships continue on a professional level.

"We all know it's a family business, but it doesn't function that way," says Albert (Chip) Lindeke, an associate and director at RRT. "No one calls George 'Dad' and George never calls Craig 'Son.' Whether you're family or not, there's respect for your ideas, and that comradery carries over."

George has cut back on his schedule somewhat, allowing for more personal flexibility. But he and Richard agree retirement isn't a healthy idea for either.

"When you have a hobby, why would you give it up?" Richard says. "Being an architect is like having a hobby, in a way. There are a lot of old timers still practicing. Maybe I'll slow down in the next two or three years. But why give up something you enjoy?"

Susan Grossman is a free-lance writer.



Phil James Photography

The St. Clement Church renovation (opposite) in Ohio is one of RRT's many noteworthy church commissions throughout the country. The Como Zoo Large Cat Exhibit (above) shelters tigers and lions with multilevel viewing capabilities. RRT renovated St. Paul's historic Union Depot (left) in 1983 to accommodate offices, restaurants and retail.



A sustainable tomorrow

By Eric Kudalis

S

ustainability is all the buzz these days. You can hardly pick up a newspaper or magazine without reading something about the green movement and sustainable design. The AIA held a national conference in Chicago that focused on sustainable design last summer, and the international Earth Summit in Rio de Janeiro in 1992 turned world attention toward the environment in a big way.

But conferences come and go, and today's headline's are tomorrow's vague memories.

Says Gregory Maxam, an architect with BWBR Architects and chairman of the AIA Minnesota Committee on the Environment, "Some people see sustainability as a fad. Part of the problem is that we went through the '70s energy crisis—which had some good results by leading to better energy-efficient technology—but then the energy crisis passed and it was business as usual. But I think the '70s led to a lot of things that we are now considering."

While the '70s energy crisis proved a catalyst for innovative energy-efficient design, the central problem has remained: over consumption. Suburban development continues to swallow the countryside, cars continue to suck up gas and choke out fumes, big industry continues to dump sewage into lakes and streams, and manufacturers continue to ravage the forests for building materials.

If anything, we've accelerated our efforts to destroy the planet since the consciousness raising of the energy crisis. Americans produce 154 million tons of garbage each year. Approximately 25 percent of all materials brought to a building site ends up in a waste dump, says Steven K. Loken, director of the Center for Resourceful Building Technology in Missoula, Mont. On top of that, nearly 54 percent of all energy used in America is related to construction—including building and transporting materials. Renewing wood products takes generations. The rotation period for growing new lumber is 50 to 70 years, Loken says.

"Part of the issue is how can we use less lumber better," Loken says. "We need to find ways to recycle waste and turn it into construction products."

Clearly architects have a stake in sustainable design.

In its broadest sense, sustainable design determines ways of lessening a building's environmental impact. The American Institute of Architects outlines five categories architects should consider in designing for a sustainable future: building materials, indoor environment, energy efficiency, site planning, and recycling and waste management.

Yet sustainability is also about the human soul, about creating places that are enriching and rewarding.

Says David Early in the Fall 1993 issue of *The Urban Ecologist*, "Creating community is at the core of any sustainable

design. Sustainability is not simply about creating ecologically appropriate buildings or cities; it is about creating unique places that express the continuity of our habitation and the interconnectedness of all people and things. This underlying philosophy, together with transit-oriented and mixed-use land use, ecological design, and resource-conserving technology, constitute truly sustainable design."

Community—or the lack there of—is at the crux of two recently published books about suburban sprawl. Joel Garreau looks at the amorphous suburbs in *Edge City: Life on the New Frontier* and sees an economically thriving machine that nonetheless drains the psyche with its placelessness, sterility and fakery. "For some who recognize the future when they see it, but always hoped it might look like Paris in the 1920s, the sprawl and apparent chaos of Edge City make it seem a wild, raw, and alien place," Garreau writes.

William Morrish of the Design Center for the American Urban Landscape at the University of Minnesota sees the steady outward push as a financial drain, and a waste of an existing infrastructure. "It's a matter of capitalizing on the investment already made," Morrish says (*AM*, July/Aug. 1992). ... "You have an invested wealth in infrastructure in the city, collective wealth that we all have built and paid for—roads, sewers, buildings, cultural facilities, city institutions, churches, retail, commercial."

In *The Geography of Nowhere*, James Howard Kunstler argues that suburban sprawl is more than a waste of natural resources, it's just plain ugly.

While suburban sprawl is one issue of sustainability, health is another. Jonathan Miller of the AIA Minnesota Committee on the Environment emphasizes that avoiding "toxicity" is becoming a driving issue of sustainable design as Americans become more concerned about a healthier lifestyle.

The Environmental Protection Agency reports that indoor air pollution caused by such factors as excessive moisture, radon, and gases emitted from carpets and treated wood products ranks as the fourth largest environmental threat to Americans. Health problems include asthmatic attacks, allergic reactions and eyes, nose and throat irritation. Home sweet home apparently isn't so sweet with all those

From solar

heating to exotic

landscapes,

Minnesota

architects are

forging new

directions in

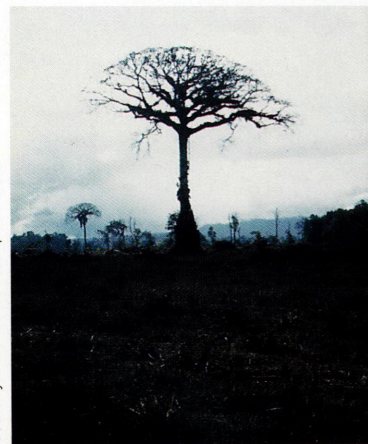
sustainable

design

carpet glues and formaldehyde-emitting particle-board products clogging the indoor air.

LHB Engineers & Architects of Minneapolis recognizes indoor pollutants and is doing something about it. The firm is building Health House '94, a single-family house in Chanhassen, Minn., for the American Lung Association. When the house plans are previewed at the Minneapolis Home Show in September this year, the house will showcase how properly selected materials, heating and ventilation systems and construction techniques can eliminate toxins and pollutants from the home and increase energy efficiency.

Rick Carter, whose firm LHB previously designed a toxin-free house for a client suffering from environmental illnesses, says that Health House '94 will emphasize readily available materials and systems, making such a house feasible and affordable for the average home buyer. The architect is working closely with the Center for Resourceful Building Technology,



Courtesy The Andersen Group Architects

A single tree stands on a devastated tract in the Rain Forest of Central America. Can architects working toward a sustainable future save the Rain Forest?

which researches building products to foster efficient energy and resource use within the building industry.

The Weidt Group of Minnetonka also is proving an indispensable consulting resource for architects, engineers, institutions and utilities dealing with energy-efficiency.

For the Center for Energy and Environmental Education at the University of Northern Iowa, for instance, The Weidt Group consulted with Architects Wells Woodburn O'Neil of Des Moines on this 35,000-square-foot environmental-education building. The building slips unobtrusively onto the prairie/woodland site while minimizing fossil-fuel use with natural daylighting, passive-solar heating, natural ventilation, and state-of-the-art mechanical and electrical equipment. While these features save energy, they also serve as teaching devices.

With RSP Architects of Minneapolis, The Weidt Group is consulting on the expansion of the Wolf Ridge Environmental Learning Center in Finland, Minn. The Center, which offers environmental education to approximately 14,000 young students yearly, plans to nearly double its facilities with more dormitory, classroom and auditorium space. The buildings are meant to demonstrate the relationship between buildings, energy and environment. The design team predicts that the new buildings will beat energy-efficiency codes by nearly 60 percent with the use of daylighting, passive-solar heat and such alternative energy sources as photovoltaics and wind.

Although that sounds high-tech, the wood-clad buildings won't look high-tech with their sloped roofs, porches, and dormers. Meant to blend in with the existing structures, the new buildings will help create a "village" look to the campus.

"The director Jack Pichotta didn't want to celebrate technology in a big way," says Michael Plautz of RSP. "He wanted

it to be softer, more feminine and nurturing. He gave us a challenge and heightened sensitivity. The challenge is that he wants the buildings to perform better than any other building of their type in this climate. And he wants us to do that in a way that minimizes its environmental impact and blends in with the existing campus."

Minimum environmental impact is demonstrated most clearly in the Remote Forest Ecology Building, a circular earth-integrated building set off from the main campus and used for the study of forest ecology. Plautz says that the forms of the building take their cue from nature: "clearings, gathering places, grottos, natural shelters, soaring trees, horizontality and verticality."

Also closely aligned with nature is the Lapa Rios resort in Costa Rica. Designed by David Andersen of The Andersen Group Architects in Minneapolis, the facility is Andersen's first venture into the emerging ecotourism industry. The resort provides educational opportunities for tourists seeking insight and knowledge of exotic environments—in this case the Rain Forest.

"Developing an ecotourism facility is a matter of sensitivity," Andersen says. "Every culture and ecosystem is unique. The facility should embody that uniqueness."

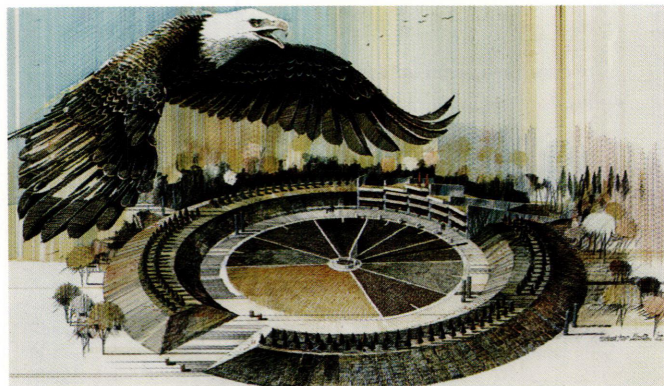
While Andersen is working on several other ecotourism resorts, he notes that the success of ecotourism facilities leads to inherent problems.

"Places like Costa Rica, Belize and countries in east Africa are trying to come to grips with their own success," Andersen states. "They are learning that a tourist destination can be 'loved to death.' Where people once came to enjoy the unique flora and fauna of an area in relative isolation, they are finding busloads of tourists clamoring for that unique experience."

As far as sustainable design and energy-conscious design goes, Wolf Ridge and Lapa Rios are in a unique class. Most sustainable-design innovations are invisible to the public.

"A lot of the sustainable issues aren't glamorous," Plautz says, citing knowledge of mechanical systems, nontoxic materials, renewable resources and other behind-the-scenes technology as architects' primary tools in dealing with sustainability. Plautz also stresses the need for collaboration between architects, engineers, building contractors, environmentalists and other experts working on energy-saving, resource-renewable buildings.

For architects, designing for sustainability is the only choice. After all, natural resources are running out.



Michael Plautz

The Remote Forest Ecology Building, designed by RSP Architects, blends architecture with nature.



Rural Fringes

The American farm landscape and wetlands are ripe for reclaiming after decades of rapacious development

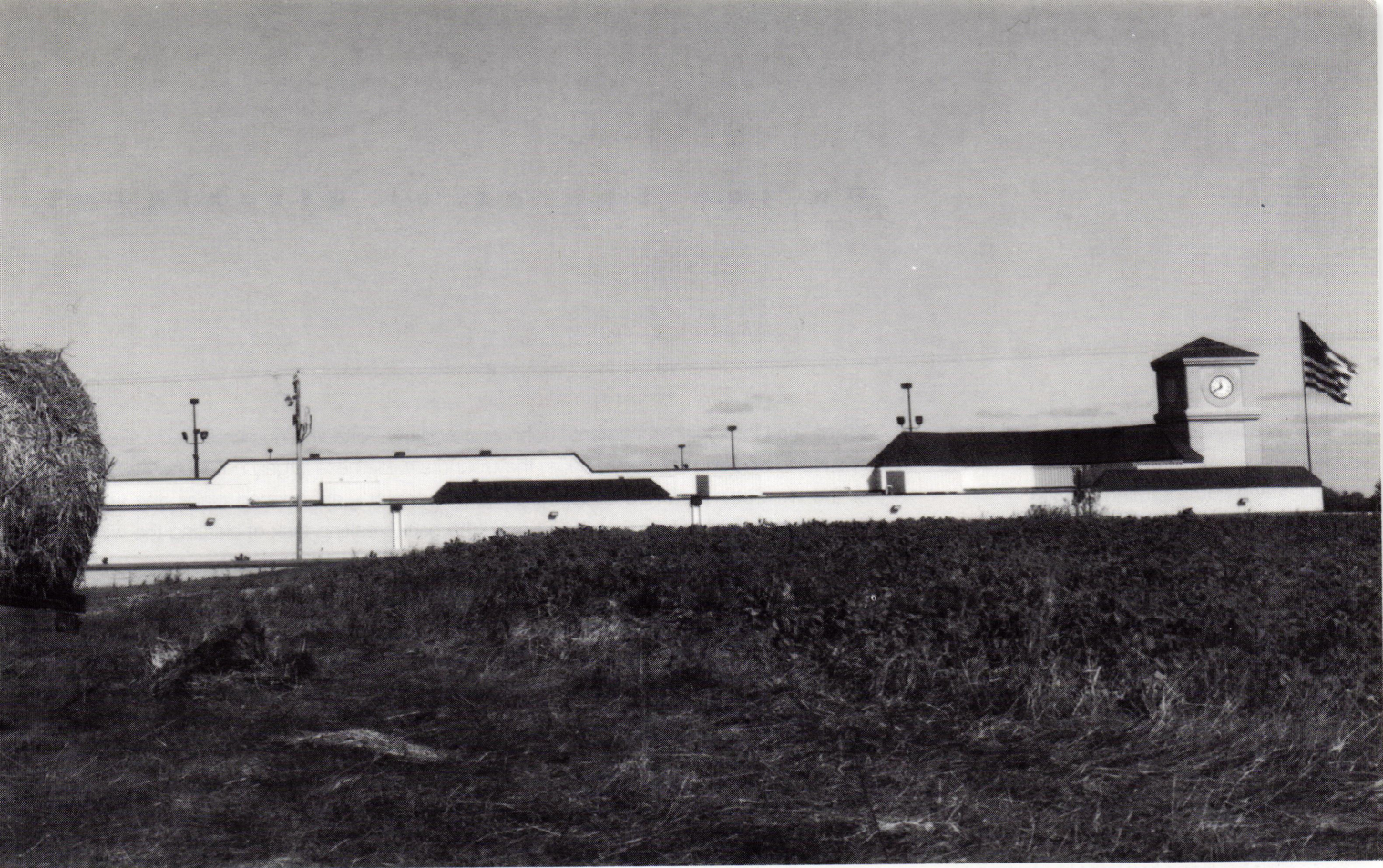
By Camille LeFevre

Since the earliest immigrants began settling America in the 1600s, the Judeo-Christian attitude toward this land has been a dichotomous one: the return to a bountiful Eden coupled with the “discovery” of a savage wilderness in need of domination. There was seemingly limitless land and resources on which to exercise this dialectic, and it reached its apex in the 1800s as the pioneer spirit, by which anyone unhappy with their circumstances could “light out for the Territory” (in the words of Huck Finn) and find a new life by exploiting land farther west.

In the 20th century, this mentality—subsidized by federal tax policies, encouraged by free enterprise, and promoted by the interstate-highway system and American car culture—has enjoyed continued acceptance in another rapacious guise: the middle-class dream of a detached house surrounded by manicured lawn. In pursuit of this dream, Americans began abandoning the urban core, which resulted in suburban sprawl and then the amoebic expansion of Edge Cities.

“Abundant land has meant cheap land. Forests and farms have never been in short supply in the United States,” writes Kenneth T. Jackson in *Crabgrass Frontier: The Suburbanization of the United States*. As a “‘people of plenty,’ Americans could afford the wastefulness of low-density housing on the metropolitan fringe.”

No more. The United States is losing about 1.5 million acres a year to development while “some [urban] streets



are now so devoid of life that even the rats and roaming dogs have gone," Jackson writes.

We can no longer afford to nurture an antiquated version of the pioneer spirit, with its emphasis on individual rights and freedoms; city subsidization of suburban development; consumptive code of use, abuse and discard; and disregard of wildlife habitat, ecological function and the human need for a diversity of landscapes with aesthetic integrity. We have an obligation to turn our attention back to land already built or in use—farmland on the edges of metropolitan areas and the urban core, for example—to make land preservation and restoration an integral part of American progress.

Reorientation of this magnitude first requires another look at land—its use and its value. "To developers and planners, farmland is often called 'vacant land,'" says Lee Ronning, director of the Metro Farm Program, part of the Land Stewardship Project, a nonprofit organization based in Marine on St. Croix that promotes sustainable agriculture. "They see this land as waiting to be put to its 'highest use'—which is development. Farmland is a use of the land. It provides open space, biodiversity, wildlife habitats and food [for human consumption]."

Fifty-six percent of the nation's prime agricultural land is near metropolitan areas. In the Twin Cities' seven-county metro area alone, more than 100,000 acres of farmland have been lost to development since 1982, according to the Minnesota Agricultural Statistics Service.

And according to 1990 U.S. Census figures, the 14-county area from St. Cloud through the Twin Cities to Rochester is the fastest developing section of land between the Northern Plains and the Eastern seaboard.

"In the not-so-distant future, communities will try to restore farmland and won't be able to," Ronning warns. "Farmland is not just dirt; it's soil and it's living. We have a finite amount of topsoil, not just land, but topsoil to grow food for everybody that will ever live on this planet."

Once topsoil (a complex microbial ecosystem) is bulldozed away, it's gone forever, she adds, while paving compacts the soil so irrevocably that plowing cannot restore its productivity.

The Metro Farm Program raises public awareness of these dangers and farmland's value as it works to keep land in the hands of farmers. One major threat to farmland is the bundle of assessments for urbanization costs (storm sewers, road construction) that accompany encroaching development and often drives farmers out of business. But as of August 1993, Twin Cities area farmers enrolled in the Metro Ag Preserves Program (MAPP) no longer have to

Development continues to swallow farmland at the fringes of urban areas. This working farm in Woodbury, Minn., is zoned for residential development. The outlet mall will soon be surrounded by housing and more retail. Photo by Christopher Faust, The Suburban Documentation Project.

Continued on page 50

O n t h e S h o r e s o f G i t c h i g u m i

In a land of timber wolves and
town houses, Minnesotans
contemplate the future of
Lake Superior's North Shore
landscape

By Adelheid Fischer

Photographs by Peter Lindman

When the Norwegian immigrants John and Andrew Tofte first homesteaded Lake Superior's North Shore in the early 1890s, they found a wilderness largely untouched by the plow or the ax. Setting up housekeeping on a prospector's abandoned claim, the twins and their brother-in-law Hans Engelsen began the backbreaking task of clearing the woods for hay fields. Profits from the sale of lumber from one homestead alone could pay for a family's land and outfit them with boats and fishing gear. In no time, the enterprising settlers added commercial fishing and boat building to farming, logging and saw milling.

They were soon joined by many others. In the North Shore's heyday, fishing stations dotted the coast nearly every half mile, and lumber companies penetrated the interior of white-pine country north of the lake.

But the region's boom economy, like others around the country based on resource extraction, has waned. Loggers still work the woods and freighters leave shoreline plants heavy with processed iron ore. But many now consider vacation-home housing starts a more fitting economic barometer for the region than the commodities exchange. Like tiny fishing, mining and timber towns across the nation, communities along the shore are hoping to cash in on their natural beauty and cultural heritage through tourism.

But the rash of new condominium getaways, vacation homes, ski hills and golf courses has left some wondering whether tourism is a cash cow or a Trojan horse. Critics point to increasing environmental degradation and social dislocation and say it's time to close the gate to further growth.

"Im asked this question a lot: How much development is too much development?" says Tim Kennedy, planning director in Cook County, one of three Minnesota counties bordering the lake. "There's got to be a line out there somewhere we don't want to cross, but I don't think anyone sees where that line is yet."

What development proponents and opponents seem to agree on is the need to preserve the splendor of the region's natural and cultural features. Stretching 150 miles from Duluth to the Canadian border, the Minnesota leg of the North Shore has always attracted tourists. Rugged highlands sweep down to a rocky coast of volcanic bedrock gouged by glaciers. Before the availability of medication, summer hay-fever sufferers traveled by steamship to these cool shores for relief.

Hunters, anglers and their families could find accommodations in the tiny shoreline cottages









erected by commercial-fishing households looking to supplement their incomes. As automobiles became more affordable, motels and commercial establishments sprang up to serve the motoring-for-pleasure crowd. Completed in the 1920s, scenic Hwy. 61 paved their way, meandering through forests of luminous white birch and brooding conifer stands, periodically skirting bluffs that offered motorists heady vistas of the lake.

Much of what drew these early tourists still exists on the shore, says Glenn Kreag, Minnesota Sea Grant's assistant specialist for tourism and recreation. "People come to the shore for the scenic beauty," he observes. "We've found in a Sea Grant study about 10 years ago that the beauty of the shore and the lake and the wild, natural character of the area were key features that attracted people."

Topping most agendas is the lake. "Lake Superior is recognized as the cleanest body of water in the world," says Peter Gillen, compliance coordinator with the Minnesota Pollution Control Agency. In 1984 it was given Outstanding Resource Value Water status, a designation that preserves its high quality by restricting new sources of polluted discharge into the lake.

The lake adds complexity to an already rich ecosystem. Its rocky rim, for example, hosts rare southerly communities of arctic plants, leftovers from the last glacier, which receded about 12,000 years ago. North of the lake, an unusual mingling of forest types provides ideal songbird breeding habitat. The Superior National Forest hosts 155 species of songbirds, the highest number on the entire North American continent.

The area's cultural heritage matches its scenic splendor. Though it lacks architectural gentility, the north coast is rich in industrial infrastructure, from rural roadways and the filigree of massive iron-ore loading docks to the fine tracery of electric lights outlining the lake freighters steaming into the night. This year Scenic America, a national organization that promotes the preservation of the country's scenic roadways, recognized historic Hwy. 61 as one of the nation's top ten scenic byways. Dotting the roadside are remnants of area cultural history. Though commercial fishing has little recovered from its near collapse in the 1950s, visitors can still pick up smoked lake trout from tiny fish stands or spend a week in a bluff-top Depression-era cabin. And the region's large public-land holdings—a mosaic of federal, state and county lands—allow people to live side by side with animals often found only in large tracts of wild lands, such as bear, moose, wolves

continued on page 51

- Bluefin Bay resort, a recent cluster development in Tofte, p.39. • Single-cabin resorts, built by fishing families in the 1930s, are disappearing along the North Shore, p.40. • Silver Creek Cliff tunnel under construction, one of two tunnels in the ongoing upgrade of Hwy. 61, p.41. • Storage garage along Hwy. 61, p.42.

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LEGEND

AIA	American Institute of Architects
AICP	American Institute of Certified Planners
ASLA	American Society of Landscape Architects
FASLA	Fellow, American Society of Landscape Architects
PE	Professional Engineer
RLS	Registered Land Surveyor

ARCHITECTURAL RESOURCES, INC.

704 East Howard Street
Hibbing, MN 55746
Tel: 218/263-6868
Fax: 218/722-6803
Other Offices: Duluth & Bemidji, MN
Established 1972

Earl Thedens	LA
Richard Rose	LA
Douglas Hildenbrand	AIA
Lyle Peters	AIA
Mark Wirtanen	AIA

Firm Personnel by Discipline	
Landscape Architects	3
Architects	10
Other Professional/Technical	9
Administrative	4
Total	26

Work %	
Residential/decks/gardens	5
Site planning & development studies	25
Parks & open spaces	20
Urban design & streetscapes	25
Master/comprehensive planning	10
Waterfront planning	15

Hibbing Downtown Renovation, Hibbing, MN; Community Square, Aurora, MN; Bemidji Lakefront, Bemidji, MN; Iron-World CCC Camp, Chisholm, MN; Finntown Mineview, Virginia, MN

ARTEKA NATURAL GREEN

15195 Martin Drive
Eden Prairie, MN 55344
Tel: 612/934-2000
Fax: 612/934-2247
Established 1970

Stewart K. Hanson	
Todd Irvine	ASLA
Alan G. Hipps	ASLA
Michael Sawyer	ASLA

Firm Personnel by Discipline	
Landscape Architects	4
Other Professional/Technical	50
Administrative	12
Total	66

Work %	
Residential/decks/gardens	50
Site planning & development studies	5
Urban design & streetscapes	5
Multi-family housing/PUDS	20
Office parks/commercial	20

Arbor Pointe, Inver Grove Heights, MN; Dyste Residence, Medina, MN; Schellhaus Residence, Edina, MN; Golle Residence, Eden Prairie, MN; Rivers Landing Monumentation, Eden Prairie, MN

BAILEY CORPORATION

5800 Baker Road, Ste. 110
Minnetonka, MN 55345-5903
Tel: 612/933-4300
Fax: 612/933-8663
Established 1967

Jerry L. Bailey	ASLA
-----------------	------

Firm Personnel by Discipline	
Landscape Architects	1
Other Professional/Technical	1
Administrative	1
Total	3

Work %	
Residential/decks/gardens	20
Site planning & development studies	25
Parks & open spaces	10
Master/comprehensive planning	25
Commercial site/landscape design-build	20

Sabal Palms, Intergenerational Care Center, Largo, FL; Westwinds Senior Residence, Minnetonka, MN; SkyRidge Business Park, Minnetonka, MN; Danford Residence, Edina, MN; Mann Residence, Eagan, MN

DEAN BAILEY ASSOCIATES, INC.

15281 Creekside Court
Eden Prairie, MN 55346
Tel: 612/937-1124
Established 1992

J. Dean Bailey	ASLA
----------------	------

Firm Personnel by Discipline	
Landscape Architects	1
Administrative	1
Total	2

Work %	
Residential/decks/gardens	90
Site planning & development studies	5
Multi-family housing/PUDS	5

Bruce Bren Parade Home, Minnetonka, MN; Ahlberg Residence, Golden Valley, MN; Grand Metropolitan, Minneapolis, MN; Kosieradzki Residence, Minnetonka, MN; Luther Residence, Edina, MN

BARTON-ASCHMAN ASSOCIATES, INC.

111 Third Avenue S., Ste. 350
Minneapolis, MN 55401
Tel: 612/332-0421
Fax: 612/332-6180
Established 1946

Barry J. Warner	ASLA, AICP
Wm. Scott Midness	ASLA
John C. Mullan	PE
David B. Warzala	PE
Michael N. Gorman	PE

Firm Personnel by Discipline	
Landscape Architects	5
Other Professional/Technical	6
Traffic/Transportation Engineers	4
Civil Engineers	4
Environmental Scientists	3
Administrative	3
Total	25

Work %	
Site planning & development studies	15
Environmental studies (EIS)	10
Parks & open spaces	20
Urban design & streetscapes	20
Recreation areas (golf, ski, etc.)	10
Master/comprehensive planning	5
Highway/transportation planning and design	20

Nicollet Avenue South Corridor Urban Design Study, Minneapolis, MN; German Park Renovation Master Plan, New Ulm, MN; Bearpath Golf and Country Club Landscape and Architectural Improvements, Eden Prairie, MN; University of St. Thomas Grotto Renovation, St. Paul, MN; Hennepin Parks Regional Trails Master Plan, Hennepin County, MN

BRW, INC.

700 Third Street S.
Minneapolis, MN 55415
Tel: 612/370-0700
Fax: 612/370-1378
Established 1956

Don Hunt	ASLA
Jack Lynch	ASLA
Miles Lindberg	ASLA
Craig Amundsen	AIA, AICP
Arijs Pakalns	AIA, AICP

Firm Personnel by Discipline	
Landscape Architects	28
Other Professional/Technical	206
Administrative	51
Total	285

Work %	
Site planning & development studies	10
Environmental studies (EIS)	20
Parks & open spaces	15
Urban design & streetscapes	20
Recreation areas (golf, ski, etc.)	10
Master/comprehensive planning	15
Multi-family housing/PUDS	10

Uplands Condominiums at Parkers Lake, Plymouth, MN; Centennial Lake Park, Edina, MN; Fortune Bay Resort Casino, Tower, MN; West Health Campus Master Plan, Plymouth, MN; Visitor Access Study for Yosemite National Park, CA

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■ CLOSE GRANT LANDSCAPE ARCHITECTS

610 Northwestern Building
275 E. Fourth Street
St. Paul, MN 55101
Tel: 612/222-5754
Fax: 612/222-1017
Established 1977

Bob Close ASLA
Roger Grant ASLA

Firm Personnel by Discipline
Landscape Architects 3
Administrative .5
Total 3.5

	Work %
Residential/decks/gardens	10
Site planning & development studies	20
Parks & open spaces	30
Urban design & streetscapes	10
Master/comprehensive planning	10
Multi-family housing/PUDS	5
Highway/freeway	15

U.S. Highway 2, Grand Forks, ND; Shingle Creek Park, Minneapolis, MN; Ecology Building, St. Paul, MN; Minnesota Zoo Central Plaza, Apple Valley, MN; Hennepin/Dunwoody Improvement Project, Minneapolis, MN

■ COEN + STUMPF + ASSOCIATES, INC.

128 North Third Street
Minneapolis, MN 55401
Tel: 612/341-8070
Fax: 612/339-5327
Established 1992

Jon E. Stumpf RLA
Shan A. Coen LA

Firm Personnel by Discipline
Landscape Architects 2
Other Professional/Technical 1
Administrative 1
Total 4

	Work %
Residential/decks/gardens	15
Site planning & development studies	10
Parks & open spaces	20
Urban design & streetscapes	10
Recreation areas (golf, ski, etc.)	10
Master/comprehensive planning	5
Spiritual/worship	30

Gooseberry Falls Visitor Center, North Shore Lake Superior, MN; St. Francis Peace Garden/Park, Mayo Clinic, Rochester, MN; Lutsen Village Inn Ski Resort, Lutsen, MN; Mack Residence, St. Paul, MN; Lamb Residence, Vail, CO

■ DAHLGREN, SHARDLOW, AND UBAN, INC.

300 First Avenue N., Ste. 210
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Fax: 612/337-5601
Established 1976

C. John Uban ASLA
John Shardlow AICP
Geoff Martin ASLA
Wallace Case ASLA
Ed Hasek ASLA

Firm Personnel by Discipline
Landscape Architects 8
Other Professional/Technical 3
Planners 6
Administrative 2
Total 19

	Work %
Site planning & development studies	20
Environmental studies (EIS)	10
Parks & open spaces	10
Urban design & streetscapes	15
Recreation areas (golf, ski, etc.)	5
Master/comprehensive planning	20
Multi-family housing/PUDS	15
Expert testimony	5

Fergus Falls Downtown Redevelopment Plan & Streetscape, Fergus Falls, MN; Robbinsdale Downtown Master Plan & Streetscape, Robbinsdale, MN; Peninsula Point, Two Rivers Historical Park, Anoka, MN; Methodist Hospital Sculpture Garden, St. Louis Park, MN; State Office & Transportation Building Parking Facilities, St. Paul, MN

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1121 E. Franklin Avenue
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Fax: 612/871-1746

Dean Dovolis AIA
Brian Johnson AIA
John V. Ruggieri ASLA

Firm Personnel by Discipline
Landscape Architects 4
Architects 19
Administrative 2
Total 25

	Work %
Site planning & development studies	30
Parks & open spaces	10
Urban design & streetscapes	20
Recreation areas (golf, ski, etc.)	10
Master/comprehensive planning	10
Multi-family housing/PUDS	20
Lac Courte Oreilles Master Plan, Hayward, WI; Mt. Airy Family Housing Modernization, St. Paul, MN; Clearwater Estates & Golf Course, Clearwater, MN; Mt. Airy Community Center, St. Paul, MN; Bryn Mawr Park Playgrounds, Minneapolis, MN; Plymouth Avenue Townhouses Redevelopment, Minneapolis, MN	

■ ELLERBE BECKET, INC.

800 LaSalle Avenue
Minneapolis, MN 55402-2014
Tel: 612/376-2000
Fax: 612/376-2271
Established 1909

Bryan Carlson ASLA
Richard Varda AIA, ASLA
Krisan Osterby-Benson LA
David Loehr AIA, AICP
Randal Manthey LA

Firm Personnel by Discipline
Landscape Architects 11
Architects 227
Other Professional/Technical 395
Administrative 141
Total 774

	Work %
Site planning & development studies	60
Parks & open spaces	5
Urban design & streetscapes	15
Master/comprehensive planning	20

University of Notre Dame, South Bend, IN; State Farm Data Center, Bloomington, IL; Dow Chemical Co., Midland, MI; Osborn Retirement Community, Rye, NY; Science Museum of Minnesota, St. Paul, MN

■ ERNST ASSOCIATES

122 West 6th Street
Chaska, MN 55318
Tel: 612/448-4094
Fax: 612/448-6997
Established 1977

Gene F. Ernst ASLA

Firm Personnel by Discipline
Landscape Architects 1
Administrative 1
Total 2

	Work %
Residential/decks/gardens	3
Site planning & development studies	15
Parks & open spaces	27
Urban design & streetscapes	15
Recreation areas (golf, ski, etc.)	5
Master/comprehensive planning	5
Multi-family housing/PUDS	30

Chaska City Hall/Library, Chaska, MN; Conagra Corporate Campus, Omaha, NE; University of St. Thomas, Minneapolis, MN; WestHealth Campus, Plymouth, MN; Jolly Hall Courtyard, Washington University, St. Louis, MO

DAMON FARBER ASSOCIATES

253 Third Avenue S.
Minneapolis, MN 55415
Tel: 612/332-7522
Fax: 612/332-0936
Established 1981

Damon Farber	ASLA
Joan MacLeod	RLA
Dan Stordal	RLA

Firm Personnel by Discipline	
Landscape Architects	5
Other Professional/Technical	1
Administrative	1
Total	7

Work %	
Residential/decks/gardens	5
Site planning & development studies	30
Parks & open spaces	10
Urban design & streetscapes	20
Recreation areas (golf, ski, etc.)	15
Master/comprehensive planning	15
Multi-family housing/PUDS	5

Mall of America, Bloomington, MN; Maplewood Community Center, Maplewood, MN; Canal Park Streetscape, Duluth, MN; MSP Airport Arrivals Plaza, Minneapolis/St. Paul, MN; University of Minnesota Recreational Sports Facility and Hockey Arena, Minneapolis, MN

HAMMEL GREEN AND ABRAHAMSON, INC.

1201 Harmon Place
Minneapolis, MN 55403
Tel: 612/332-3944
Fax: 612/332-9013
Established 1953

Thomas R. Oslund	ASLA
------------------	------

Firm Personnel by Discipline	
Landscape Architects	5
Architects	78
Other Professional/Technical	91
Administrative	46
Total	220

Work %	
Residential/decks/gardens	10
Site planning & development studies	15
Parks & open spaces	5
Urban design & streetscapes	15
Interior landscape/plantings	5
Master/comprehensive planning	50

Weesner Family Amphitheater, Minnesota Zoological Gardens, Apple Valley, MN; 3M, Building 275, Courtyards, St. Paul, MN; Raovac, Site Master Plan, Madison, WI; Northland College, Master Plan, Ashland, WI; Earlham College, Richmond, IN

HAUCK ASSOCIATES, INC.

3620 France Avenue S.
St. Louis Park, MN 55416
Tel: 612/920-5088
Fax: 612/927-8069
Established 1990

Robert P. Hauck	ASLA
Firm Personnel by Discipline	
Landscape Architects	1
Other Professional/Technical	2
Administrative	1
Total	4

Work %	
Residential/decks/gardens	55
Recreation areas (golf, ski, etc.)	15
Multi-family housing/PUDS	5
Neighborhood amenities & renovation	25

Edina Country Club (monumentation, signage, lighting, brick paving, planting), Edina, MN; Parkers Lake Suncourt Homes (streetscape & intimate-scaled private yards), Plymouth, MN; Ashton Residence (pond/waterfall, prairie gardens, wildlife area), Medina, MN; Hanson Residence (pond/fountains, arrival area/entry re-design), Hopkins, MN; Moore Residence (estate arrival area entrances, pool area, porch addition), Orono, MN

HOISINGTON KOEGLER GROUP INC.

7300 Metro Boulevard, #525
Minneapolis, MN 55439
Tel: 612/835-9960
Fax: 612/835-3160
Established 1982

Mark Koegler	ASLA
Fred Hoisington	AICP

Firm Personnel by Discipline	
Landscape Architects	3.5
Urban & Fiscal Planners	3
Administrative	1.5
Total	8

Work %	
Site planning & development studies	20
Parks & open spaces	20
Urban design & streetscapes	25
Master/comprehensive planning	20
Multi-family housing/PUDS	5
Public finance planning	10

Central Middle School Athletic Field Design, Eden Prairie, MN; County Road 3 Corridor Study, Hopkins, MN; Northfield Strategic Plan, Northfield, MN; Virginia Comprehensive Plan, Virginia, MN; H.B. Fuller Corporate Center Master Plan & Nature Preserve, Vadnais Heights, MN; City Center Vision 2002 Plan, Chanhassen, MN; 50th & France Urban Design Concept, Minneapolis, MN

KEENAN & SVEIVEN INC.

14411 McGinty Road West
Wayzata, MN 55391
Tel: 612/931-3122
Established 1990

Kevin J. Keenan	ASLA
-----------------	------

Firm Personnel by Discipline	
Landscape Architects	2
Other Professional/Technical	5
Administrative	1
Total	8

Work %	
Residential/decks/gardens	95
Parks & open spaces	5

Lundell Residence, Medina, MN; Behnke Residence, St. Louis Park, MN; Sharma Residence, North Oaks, MN; Profit Residence, Long Lake, MN; Ross Residence, Bloomington, MN

LANDMARK DESIGN, INC.

105 Orono Orchard Road
Long Lake, MN 55356
Tel: 612/476-6765
Established 1979

Greg Kellenberger	ASLA
Dana Kellenberger	

Firm Personnel by Discipline	
Landscape Architects	3
Other Professional/Technical	.5
Administrative	.5
Total	4

Work %	
Residential/decks/gardens	25
Parks & open spaces	5
Multi-family housing/PUDS	5
Residential developments: site planning & landscape design	65

Residential Developments: Wild Ridge, Mahtomedi, MN; Woodlands, Eagan, MN; Woods at Elm Creek, Champlin, MN; Cloverdale Farm, Lake Elmo/Stillwater, MN; Private Residences: Hutchinson Residence, Excelsior, MN; Brunn Residence, Edina, MN

LHB ENGINEERS & ARCHITECTS

4600 W. 77th Street, Ste. 302
Minneapolis, MN 55435
Tel: 612/831-8971
Fax: 612/831-0115
Established 1966

Lauren Larsen	PE
Harvey Harvala	PE
Rick Carter	AIA
Mark Anderson	ASLA
Jerry Putnam	AIA

Firm Personnel by Discipline	
Landscape Architects	2
Architects	11
Other Professional/Technical	23
Administrative	12
Total	48

Work %	
Residential/decks/gardens	10
Site planning & development studies	25
Environmental studies (EIS)	5
Parks & open spaces	20
Urban design & streetscapes	10
Recreation areas (golf, ski, etc.)	10
Master/comprehensive planning	10
Multi-family housing/PUDS	10

Catlin Avenue Streetscape & Plazas, University of Wisconsin Superior; Murphy Oil Spur Station, Fridley, MN; Northgate Woods Landscaping & Playgrounds, Blaine, MN; Private Residence, Greenfield, MN; Harbor View Park, Superior, MN

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James Lasher ASLA
Harold Skjelbostad ASLA

Firm Personnel by Discipline	
Landscape Architects	3
Architect	1
Administrative	.5
Total	4.5

Work %	
Residential/decks/gardens	5
Site planning and development studies	10
Parks & open space	10
Urban design & streetscapes	5
Recreation areas	5
Master/comprehensive planning	10
Multi-family housing	5
Transit facilities planning	50

Minnesota Valley Transit Authority, Transit Hub, Burnsville, MN; Southwest Metro Transit Commission, Transit Hub, Eden Prairie, MN; Metropolitan Transit Commission, Transit Hub, Brookdale Center, MN; Roseville High School Site Planning & Design, Roseville, MN; Sheridan Neighborhood Early Learning Center - MCDA, Minneapolis, MN

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Fax: 612/871-6520
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Roger Bond Martin FASLA
Marjorie Pitz ASLA

Firm Personnel by Discipline	
Landscape Architects	2
Architect Intern	1
Total	3

Work %	
Residential/decks/gardens	5
Site planning & development studies	35
Parks & open spaces	20
Urban design & streetscapes	20
Master/comprehensive planning	20

Upper Iowa University Campus Redevelopment & Expansion; Sensory Garden at Minnesota Landscape Arboretum, Chanhassen, MN; Heritage Trail Master Plan for Minneapolis Riverfront, MN; Minnetonka Civic Center Master Plan & Site Development, MN; IronWorld USA Festival Park Site Development, Chisholm, MN

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Jack Walkky PE

Firm Personnel by Discipline	
Landscape Architects	2
Engineers	2
Other Professional/Technical	2
Surveyors	4
Administrative	1
Total	11

Work %	
Site planning & development studies	55
Parks & open spaces	10
Urban design & streetscapes	10
Recreation areas (golf, ski, etc.)	5
Master/comprehensive planning	10
Multi-family housing/PUDS	10

Minnesota Zoological Garden, Central Plaza Renovation, Apple Valley, MN; Grant Park Early Childhood & Family Development Center, Minneapolis, MN; Edina School District, Edina, MN; Mille Lacs Grand Casino, Mille Lacs, MN; Northern States Power Company Resource Center, Maple Grove, MN

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Larry Wacker ASLA
John Bergly

Firm Personnel by Discipline	
Landscape Architects	6
Planners	2
Administrative	1
Total	9

Work %	
Residential/decks/gardens	5
Site planning & development studies	10
Environmental studies (EIS)	5
Parks & open spaces	20
Urban design & streetscapes	20
Recreation areas (golf, ski, etc.)	10
Master/comprehensive planning	10
Multi-family housing/PUDS	10
Cemetery planning	10

Minnehaha Park, Minneapolis, MN; Capitol Area Architectural & Planning Board, St. Paul, MN; Cloquet Downtown Streetscape, Cloquet, MN; Gethsemane Mausoleum Gardens, New Hope, MN; Sandstone Comprehensive Plan, Sandstone, MN

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Jim G. Hagstrom ASLA

Firm Personnel by Discipline	
Landscape Architects	1
Other Professional/Technical	1
Administrative	1
Total	3

Work %	
Residential/decks/gardens	60
Site planning & development studies	20
Environmental studies (EIS)	5
Parks & open spaces	5
Recreation areas (golf, ski, etc.)	5
Master/comprehensive planning	5

St. Jude Medical, Woodridge, St. Paul, MN; YMCA Camp St. Croix, Hudson, WI; Brandt Residence, Stillwater, MN; Holmen Residence, Dellwood, MN; Gesell Residence, Mendota Heights, MN

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Firm Personnel by Discipline	
Landscape Architects	1
Architects	8
Other Professional/Technical	1
Administrative	3
Total	13

Work %	
Residential/decks/gardens	10
Site planning & development studies	10
Parks & open spaces	10
Urban design & streetscapes	30
Recreation areas (golf, ski, etc.)	10
Master/comprehensive planning	10
Track facilities	20

400M Track & Field Facility, St. Olaf College, Northfield, MN; Johnson Hall Site, Carleton College, Northfield, MN; Campus Mall & Belltower, Concordia College, Moorhead, MN; Campus Masterplan, School Sisters of Notre Dame, Mankato, MN; CMC Building Site, Carleton College, Northfield, MN

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Stillwater, MN 55082
Tel: 612/430-0056
Fax: 612/439-1179
Established 1989

Amy Stefan	ASLA
Brian Larson	AIA
Tim Stefan	AIA

Firm Personnel by Discipline	
Landscape Architects	1
Architects	3
Administrative	.5
Total	4.5

Work %	
Residential/decks/gardens	10
Site planning & development studies	20
Parks & open spaces	20
Urban design & streetscapes	20
Master/comprehensive planning	20
Multi-family housing/PUDS	10

Shriners Hospital for Crippled Children Play Area & Recreational Trail, Minneapolis, MN;
Horn Towers Housing Courtyard,

Minneapolis, MN; Lyndale Manor Housing Courtyard, Minneapolis, MN; County Road 5 Planting & Recreational Trail, Stillwater, MN; McDaniel Residence, Shorewood, MN

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Duane T. Prew	PE
James E. Voyer	PE
Westly J. Hendrickson	AIA
	AICP
William J. Armstrong	AIA
Richard L. Gray	ASLA

Firm Personnel by Discipline	
Landscape Architects	2
Architects	10
Other Professional/Technical	126
Administrative	27
Total	165

Work %	
Site planning & development studies	60
Parks & open spaces	25
Urban design & streetscapes	5
Master/comprehensive planning	10

Concordia College Athletic Field Development, St. Paul, MN;
Macalester College Track & Field Development, St. Paul, MN;
Dakota County Bikeways, West St. Paul, MN; CSAH 42 Landscape Plan, Prior Lake, MN;
Riverside Commons Plaza, Walkway & Pedestrian Bridge, Northfield, MN

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717 Third Avenue S.E.
Rochester, MN 55904
Tel: 507/288-6464
Fax: 507/288-5058
Established 1970

Donald R. Borcharding	PE
Ronald V. Yaggy	PE
Ronald L. Fiscus	ASLA
Christopher W. Colby	AIA

Firm Personnel by Discipline	
Landscape Architects	2
Architects	6
Other Professional/Technical	39
Planners	4
Administrative	11
Total	62

Work %	
Site planning & development studies	76
Parks & open spaces	6
Urban design & streetscapes	18

Stewartville Main Street Streetscaping Plan, Stewartville, MN; Cannon Falls Comprehensive Plan & Annexation Analysis, Cannon Falls, MN; Southbridge Redevelopment, Mason City, IA; Chester Woods Recreation Area, Olmsted County, MN; Northwest Plaza Shopping Center, Rochester, MN

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worry about such assessments, due to a state law developed and advocated by the Metro Farm Program.

Previously, MAPP offered eligible farmers assessment protection from sanitary sewers and public water systems, and farmland enrolled in the program is assessed at its agricultural value rather than its market value. The additional legislation "provides a package of benefits to enable farmers near urban areas to continue farming on an equal footing with those farmers located outside of the metro area," Ronning says, and "allows metro farmers to make long-term agricultural investments. . . without urban pressures."

Unfortunately, only one-half of the metro area's farmers are eligible for MAPP. Before a farmer can enroll, the local government has to have included agriculture in its comprehensive plan, and have zoned and planned the land for long-term agriculture with a density of no more than one dwelling per 40 acres. Local governments often balk at agricultural zoning since a higher density of housing and services adds to the tax base. So the Metro Farm Program preserves farmland through other means as well.

In January 1992, the Metro Farm Program formed the Minnesota Land Trust, which plans to purchase or have donated conservation easements and development rights from landowners; to accept donations of land and, when possible, buy land outright; to rent farmland owned by the Trust to a sustainable farmer; and to preserve undeveloped land as is. The Trust is currently working on easements totaling about 1,000 acres, primarily in the metro area.

The Metro Farm Program also supports such grass-roots activism as Inver Grove Heights's adoption of a city code that protects farmers from development pressures. The 1991 code shields commercial cropland in parcels as small as one acre from eminent-domain acquisitions for residential, commercial or industrial uses; and special assessments for sew-

er, water and some streets can be deferred for up to 25 years.

Saving outlying farmland from urban expansion through legislation, easements and zoning is only half the battle. Turning the attention of architects, designers, planners, developers and neighborhood citizens back to urban areas already developed—with an eye toward ecological restoration—is one way of enhancing quality of life within the urban core. As Joel Garreau writes in *Edge City: Life on the New Frontier*, "Only if life is perceived as pleasant and affordable by

"Only if life is perceived

as pleasant and

affordable by [people]

living farther in will there

be any hope of relieving

pressure on the land

farther out."

—Joel Garreau

the real human beings living farther in will there be any hope of relieving pressure on the land farther out."

The proposed Phalen Village Small Area Plan holds such promise. A collaboration between the City of St. Paul, the citizens of District 2, the Washington/Ramsey Watershed District and the Department of Natural Resources, the plan entails demolishing the 30-year-old Phalen Shopping Center, restoring the wetland—Ames Lake—beneath it and landscaping a park that would further enhance the ecological diversity of the urban landscape. (Ames Lake once functioned as

a watering hole for beef cattle raised in the area.)

The job of returning the developed site to its original ecological function was left to Joan Nassauer, professor and head of the University of Minnesota's Department of Landscape Architecture, and her research assistants. As a designer, she says, her task is "to design this [landscape] so people notice it and know it's there. And at least attend to its function. That's the conceptual difference between thinking of a wetland or farmland as undeveloped land and saying 'there's a wetland and it's part of the fabric of this neighborhood.'"

To this end, the park is meticulously planned. To indicate the wetland is "not a backwater" but designed and cared for, Nassauer says, it's positioned at the bottom of a slope of mown lawn with zones of native vegetation planted in bands of color. A prairie-flower filter, which would purify water before it reaches the wetland, would lie in an obvious jagged-edge pattern with a neatly mown edge "to show it's intended to be there, not something someone just 'let go.'" And because the park is on a flyway for egrets and heron migrating daily from the Pig's Eye rookery north along the Phalen chain of lakes, as well as part of a North American flyway for neotropical song birds, the plan includes a habitat corridor marked by a canopy of trees. (Housing, a commercial terrace and transportation hubs next to the park were designed in an advanced architecture studio led by Harrison Fraker, the University of Minnesota's dean of the College of Architecture and Landscape Architecture, as part of a larger research project on pocket parks and transportation hubs.)

The proposed park is not only the centerpiece of the Phalen Village Small Area Plan and a primary objective of St. Paul's Northeast Community Development Corporation, it harkens back to a time when kids hunted for frogs down by the pond. The park also proposes an unprecedented reclaiming of wetland soils that for 30 years have lay beneath a parking lot and shopping center. And its design says that "the wetland is significant and that

you can't arbitrarily transform the ecological structure of a landscape," Nassauer says. "You really do need to pay attention to what's there."

As such, the proposed park departs from a world view that suggests humans should dominate nature as well as a perception that people should protect and hallow nature as something separate, Nassauer says. "It's really a way of acknowledging that the way we intervene and live in nature can enhance its function," she contends. "This design sets up a landscape that will have enormous biodiversity and immediate everyday value for a neighborhood."

Other communities and local governments throughout the United States are attempting to consolidate development and preserve farmland through other means, including urban-growth boundaries and compact housing. In Minnesota, the Metro Farm Program and the Phalen Village Small Area Plan are two more parts of this mold in which to begin recasting the pioneer spirit for the 21st century. As Bill McKibben reminds us in *Look at the Land: Aerial Reflections on America*, "Vastness is one of our fondest illusions, and one of our flimsiest."

Camille LeFevre is a contributing editor of Architecture Minnesota.

Shores

continued from page 43

loons and peregrine falcons.

The North Shore's wildness still exists, in large part, Kreag says, because the area is far from major population centers. But despite the five-hour-plus drive from the Twin Cities, tourists are coming—in record numbers.

"For a place that's supposed to be wild and natural, it's crowded, especially in the summer," Kreag says. "What concerns me is that the tremendous amount of public land that exists in Cook and Lake counties is creating a tunnel of private ownership

along Hwy. 61. That's going to make it more and more difficult to maintain some kind of character along the shore because that's the only place left to develop."

For example, less than 10 percent of the land in Cook County is in private hands, Kennedy says, and most of it borders the Hwy. 61 corridor.

As a result, North Shore ecologist Chel Anderson points out that the potential for greatest destruction today lies along the highway. Awed by the power of the shore, people often overlook its tremendous fragility. She says that the famed botanical rarities on Artist Point, a rocky peninsula that juts out from downtown Grand Marais, have declined dramatically with increased foot traffic. Soil compaction from visitors along the river in Gooseberry State Park is not only killing existing vegetation but preventing future growth.

Private development also takes its toll. "We can't make the shore a sacrifice zone because there are many species that utilize the North Shore—Lake Superior as well as inland landscapes," Anderson points out. "They're inextricably linked. Any development, whether it be something as simple as carving a road or more complicated as a ski hill or a platted development which grows over time, creates gaps or holes or barriers to travel by more mobile species like wolves. And they may isolate populations of less mobile species which don't have the option of traveling around them. When populations of individual species become isolated and there is less and less mingling between populations in a species, we see a reduction of genetic diversity. Unfortunately, to a large degree, we don't know enough about a lot of species that reside here to be able to categorically state the limits of disturbance and fragmentation that a given species can tolerate."

Development has also impacted the lake. The controversy surrounding the MPCA's recent renewal of Bluefin Bay resort's permit to discharge treated waste water into Lake Superior has once again highlighted the unresolved problem of water pollution. Developments that use more than 10,000 gallons of water per day must apply to the MPCA for a permit to discharge their treated waste water. The agency requires operators to submit monthly samples and re-

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ports for monitoring. MPCA officials maintain that the Bluefin Bay discharge is well within legal standards. Far more troubling, they point out, are existing on-site septic systems for cabins and homes that fall under the purview of local governments. Most of these systems, Gillen says, are unmonitored and failing due to poor construction, maintenance or improper installation. Further complicating the situation are thin soils in many parts of the region which do little to absorb water as it flows along bedrock slopes into the lake. Nitrogen- and phosphorus-laden runoff seeps into the lake, which, among other things, promotes the growth of algae. The lake has few natural mechanisms to cope with these foreign inputs. In time, these crystalline waters, which the early English explorer Jonathan Carver described as "pure and transparent as air," will be fouled by the slick plumes of algae that plague many other developed shorelines.

Treated or not, septic discharges into the lake should be eliminated, says one discharge critic Dr. Christopher Cole, a University of Minnesota-Morris biology professor. He advocates municipal investment in constructed wetlands away from the lake, where vegetation can absorb excess nutrients. "Lake Superior is a very sterile lake," he says. "It is very cold and has a very small watershed. It's susceptible to pollution that will throw the lake's balance off. I'm not talking about PCBs or heavy metals. It's

sensitive just to nutrient loading and that's what happens on a local scale from something like a treatment plant dumping effluent into it. If you've got all these people, their waste has got to go somewhere."

More visible are changes in the shore's cultural landscape, where rising land values are promoting homogenized development. The current price tag for shoreline property can exceed \$500 a foot, Kennedy says. With tax increases outpacing the rate of inflation, many long-time seasonal cabins and mom-and-pop resorts are being squeezed off the land and replaced by expensive retirement homes or luxury condominium and town-house cluster developments. "Nowadays you have to offer a high-amenity facility," Kennedy points out. "That's why you see the Bluefins and the Lutsen Sea Villas—because they're the ones that can charge the dollars to recover their investment. They have to build with a high-enough density to make the project economically viable."

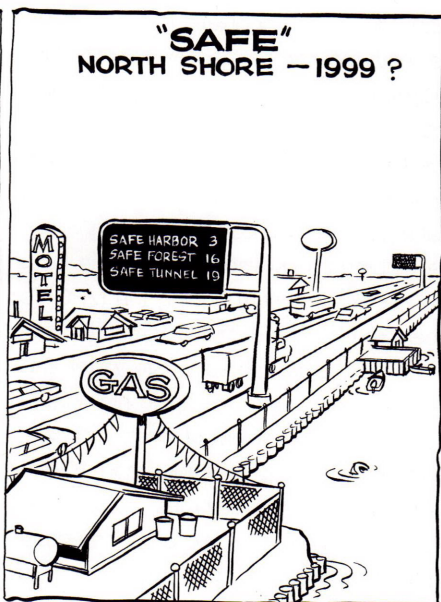
Critics complain that these developments, with their seaside or north-woods "themes," are like any other tourist lodgings around the country, lacking the distinctiveness and personal touch of the old owner-run resorts. "Unfortunately what we're bucking is the great homogenization of the entire country," says Bob Bruce, designer, urban planner and director of the Lake Superior Center in Duluth. "It's not just the North Shore, Minnesota, but planet Earth. This great

sameness is descending on us globally."

Nonetheless shore dwellers have taken measures to preserve the region's natural and cultural heritage. Though critics advocate a more stringent enforcement of regulations, Kennedy points out that Cook County has adopted ordinances that restrict commercial development to designated nodes, thereby heading off a slur of strip development. Other regulations prohibit building right on the lake edge, mandating a buffer of vegetation to help absorb sediments and runoff. Planned-unit developments must set aside 50 percent of the land in common ownership and use native species in their landscaping plan. To preserve topography, most land alterations require a permit. Yet he's most worried about the dozens of home-building projects on the shore each year in which land is bulldozed for driveways and garages by people who understand neither the regulations nor the area's special ecological conditions. To get the word out, his office has assembled a packet of fact sheets that covers such shoreline-management practices as landscaping and the maintenance of septic systems. One of his biggest concerns is the protection of natural soils and vegetation during construction.

Nelson French, director of the Minnesota Chapter of the Nature Conservancy, points to the need for developing innovative strategies that conserve more shore land without depriving county tax coffers of much-needed revenues. 3M recently donated three tracts—Carlton Peak, Park Bay and Crystal Bay—to the Conservancy. Current plans call for transferring these lands to the state. Under the payment-in-lieu-of-taxes provision, the state will pay Lake County an annual sum of \$3 per acre for its ownership of the Park and Crystal Bay properties instead of taxes. French says the annual difference is only \$1,000 less than the revenue generated through traditional tax routes.

Furthermore, he points out that studies by the Lincoln Land Institute and others "are starting to show that dollars invested in conservation at the local level are more beneficial than the dollars that are put up for development, because conservation ends up costing less than development. Although the pie in the sky with develop-



ment is that we need to focus a lot of our dollars on attracting economic development, that also brings with it a demand for new infrastructure and all kinds of services, whereas services required for conservation often are less demanding."

Case in point. The building or upgrading of highways in remote, rugged areas is costly, as the proposed renovation of Hwy. 61 illustrates. To date, this million-dollar-a-mile reconstruction has provided for tunnels to replace two crumbling stretches of cliff-hugging highway, as well as the straightening of a curve north of Split Rock and redesign of highway egress in Beaver Bay. Duluth engineer Rod Garver oversees the Minnesota Department of Transportation's long-range renovation of the 80 miles between Two Harbors and Grand Marais. He points out that "the North Shore is and probably soon will become an even more nationally recognized recreation opportunity. We believe that this is a special roadway and that it deserves special treatment."

Garver's job is to represent the interests of communities along Hwy. 61 while ensuring that its redesign continues to have "the ambiance of a rustic road" with the safety of a high-speed corridor. It is a difficult balance to strike. In the future, for example, the highway will be widened with standard 10-foot shoulders, a critical safety valve that the old road lacks. But as planner William H. Whyte points out in his book *The Last Landscape*, there is a price to greater traffic capacity and more safety. "What makes driving along back roads such a delight?" Whyte asks. "It is more than the scenery; it is the tightness of its scale. You go around abrupt

**Despite the
North Shore's
five-hour-plus
drive from the Twin
Cities, tourists are
coming—in record
numbers. And what
they complain
about most often
is crowding.**

curves, up sudden crests, under a canopy of overhanging foliage. Sometimes the view opens up to distant hills; sometimes it narrows almost to a tunnel as you pass through woods. But always the edge of the landscape is close by.... This tightness of scale is what gets improved away. Curves are straightened, crests flattened, the trees and stone fences moved out of harm's way. The edge of the landscape gets moved back."

If the shore is to maintain its identity, Anderson says, those with the most intimate knowledge of place—residents charged with the small daily offices of caretaking the shore's beauty and character—must remain one step ahead of change. Take, for example, one of the most intriguing experiments—the establishment of design guidelines for the future development of Tofte. After several franchise businesses expressed an interest in locating in Tofte, "a number of us thought it would be the beginning of the end of what was left of a small-town feel," says Dennis Rysdahl, Tofte resident and owner of Bluefin Bay resort. "There was a basic distaste for the notion of more regulation of any kind, but there was also a real concern that the town left to itself was just going to follow the dictates of the marketplace and we'd end up with something we didn't like."

Rysdahl spearheaded a community effort to establish guidelines that encourage a pedestrian atmosphere, as well as the design of buildings using traditional materials, shapes and forms. The goal: to mimic the simplicity and authentic accretionary diversity found in old fishing vil-

lages rather than the sanitized uniformity of new developments.

Their foresight has already paid off. Garver says that MNDOT will strive to reflect the town's goals in its roadway redesign through town, narrowing the right-of-way and including street curbs, low-level light fixtures, slower speeds and boldly marked pedestrian and bike crossings.

"Everyone agrees there's going to be development," says Scott Berry, a Minneapolis architect and seasonal Tofte resident who helped shape the town's design guidelines. "You're not going to stop it unless you can buy up all the land and put a moratorium on development. You can choose to let it happen or you can decide what you want it to be. For the success of tourism, for maintaining some uniqueness to Tofte, we need to decide what we want to do and guide future development in that direction."

There are those who believe that this kind of forward-thinking, frank talk and willingness to engage in the messy task of framing the future are key to a more sustainable future.

"We as a community of business people, employees, retired persons need to be involved in defining our identity and what we want to be in the future," says Anderson. "And then I think it will be a struggle to make sure that that's what we are—even if we decide we don't want to be anything different than we are today. Without some unifying definition and vision for the future, the future will simply happen to us and it will be made by a select few, some who don't even live here or simply see our community as a short-term opportunity for profit. It would be excellent if the tourism industry were to lead that effort. It has the wherewithal to do that and it would be in their interest because we have something here to offer visitors that is unlike anything else, anywhere. If we degrade that, and just conform to some vacation-land picture that's being imitated in a hundred different places, tourists would find it less desirable. And it will result in a degradation of our community life and our local culture." *Adelheid Fischer is a Minneapolis freelance writer.*

Credits

(We encourage you to support the following architects, consultants and suppliers.)

Project: Como Park Conservatory Restoration

Location: St. Paul, Minn.

Client: Division of Parks and Recreation,
City of St. Paul

Architects: Winsor/Faricy Architects, Inc.

Project team: Richard T. Faricy, FAIA,
Donald Leier, AIA, Bruce Tackman

Structural/mechanical/electrical engineers:
Bakke Kopp Ballou & McFarlin, Inc.

Photographer: Brian Droege

Windows: Wausau Windows and
Hope's Window

Lighting: Lighttoller

Overhead glazing: O'Keeffe's, Inc.

Disabled lifts: Apollo Elevators

Project: DPS Creative Interiors

Location: Minneapolis

Client: DPS Creative

Architects: Ellerbe Becket Inc.

Project manager: Kowen Peters

Project designer: Rob Reis

Project team: Tim Powers

Contractor: SCI Construction Services

Interior design: Ellerbe Becket

Metal specialties: Innovative Building
Concepts

Faux finishing: Faux Pas

Project: Mille Lacs and Lake Lena Ceremonial Buildings

Location: Mille Lacs—Mille Lacs Band
reservation District I, near Vineland, Minn.;
Lake Lena—Mille Lacs Band Reservation
District III, east of Hinckley, Minn.

Client: Mille Lacs Band of Ojibwe

Architects: Cunningham Hamilton Quiter
Architects, P.A.

Principal-in-charge: John W. Cunningham

Team members: Robert Zakars, David Scott,
David Hyde, Jennifer Yoos,
Kyle Rhinehardt, Cheryl Winger,
Mohammed Lawal

Structural engineer: Clark Engineering

Mechanical engineer: Wentz Associates

Electrical engineers: Kaeding and Associates

Contractor: Minnesota Log Homes

Interior designer: Cunningham Hamilton Quiter
Architects, P.A.

Civil survey: Comstock and Davis

Photographers: Erik Rusley and
Christian Korab

Windows: Marvin Windows

Lighting: CHQ

Casework/woodwork: Minnesota Log Homes
Furniture: CHQ

Craftsman/Artist: Alchemy

Logs: Pierce Log Homes

Project: Pillsbury Conservatory

Location: Orono, Minn.

Clients: George and Sally Pillsbury

Architects: Meyer, Scherer & Rockcastle, Ltd.

Principal-in-charge: Thomas Meyer

Project team: Richard Laffin, Marc Asmus,
Troy Kampa

Structural engineers: Meyer, Borgman &
Johnson, Inc.

Landscape architect: Herb Baldwin

General contractor: North Star Services

Photographer: Lea Babcock

Project: St. Paul Companies Corporate Headquarters Interior Renovation

Location: St. Paul, Minn.

Client: The St. Paul Companies

Architects: The Alliance, Inc.

Principal-in-charge: Carl J. Remick, Jr., AIA

Project managers: Jerry L. Hagen, AIA
(architecture), Sharry L. Cooper (Interiors)

Project architect: Jerry L. Hagen, AIA

Project designers: Thomas J. DeAngelo, AIA,
Scott Sorenson

Project team: Carolyn B. Berman, AIA

(architecture), Roger Christensen

(architecture), Ron May (interiors),

Ann Rutten (interiors)

Structural engineers: Bakke, Kopp, Ballou,
McFarlin & Associates

Mechanical engineers: Michaud Cooley
Erickson & Associates

Electrical engineers: Michaud Cooley Erickson
& Associates

Contractor: McGough Construction Co.

Interior design: The Alliance, Inc.

Acoustical consultants: L.G. Copley
Associates

Lighting consultant: Michaud Cooley Erickson
& Associates

Photographer: George Heinrich

Lighting: Optimax Fluorescent

Interior limestone: Kasota Stone,
Vetter Stone Co.

Flooring systems/materials: St. Paul Linoleum
& Carpet, Twin City Tile & Marble

Ceiling systems/materials: USG Frost

Casework/woodwork: Heartwood,
Ron's Cabinets

Furniture systems: Haworth UNI Group

Project: Theatre de la Jeune Lune

Location: Minneapolis

Client: Theatre de la Jeune Lune

Firm of record/contract: BRW Elness

Architects, Inc./Paul Madson &
Associates, Ltd.

Project manager: Paul Madson

Project architect: Kim Bretheim

Architect: Pete Keeley

General contractor: George F. Cook
Construction Co.

Structural engineer: Mattson/MacDonald

Acoustical design: Kvernstoen, Kehl &
Associates

Theater consultant: Schuler & Shook

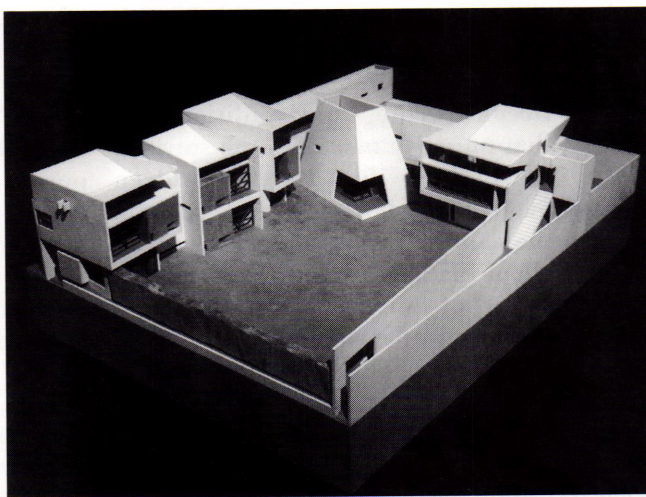
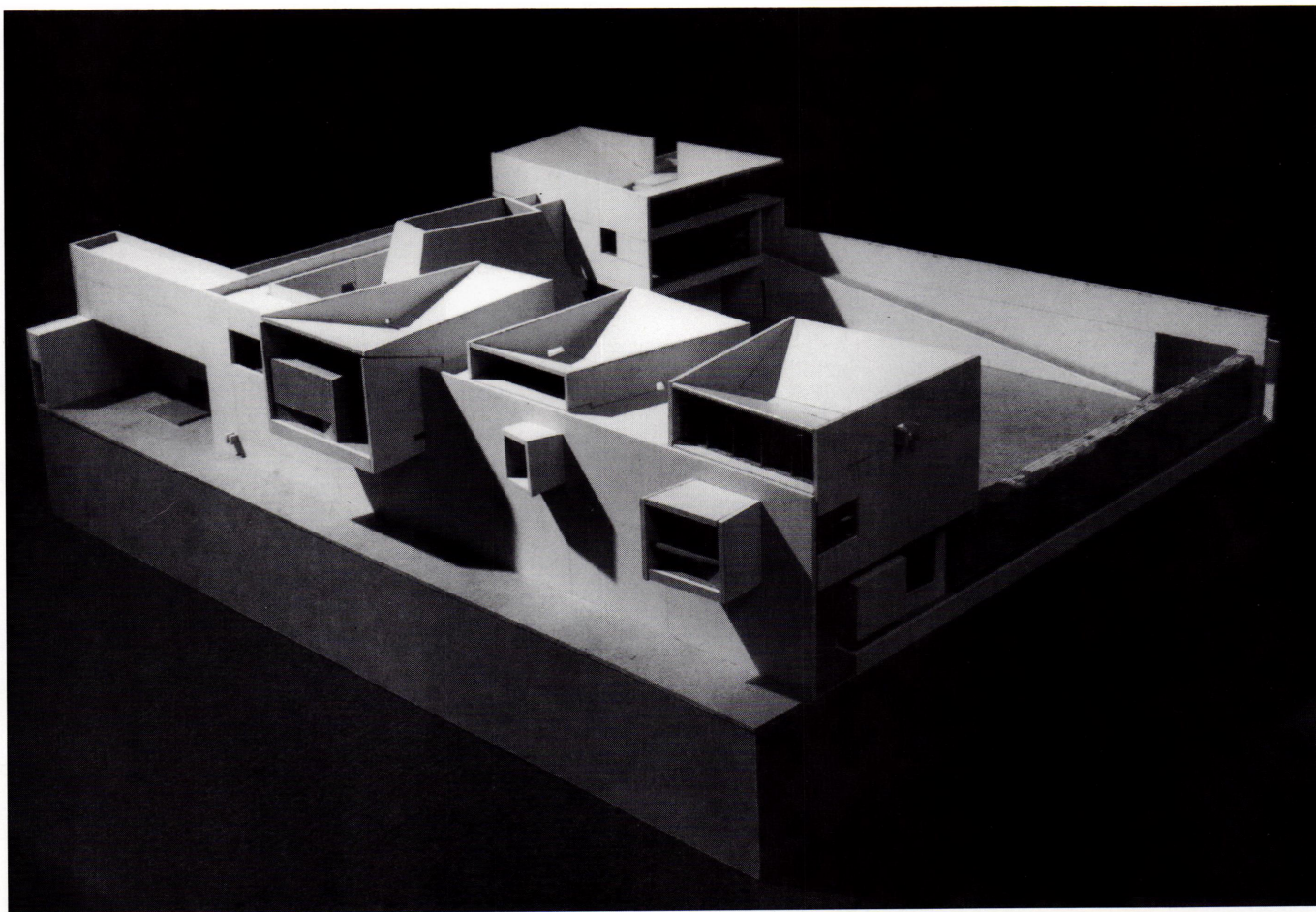
Photographer: Ralph Berlovitz

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AM

drawing board



Project: *(Unfolding house) for an extended family Choksombatchai and Ralph Nelson, AIA, Minneapolis*

Location: *Bangkok, Thailand* **Designers:** *(LOOM) Raveevarn*
The house is sheltered from the public street while a courtyard allows access to the outdoors. The different components allow for both private and shared living spaces.

AM

lost minnesota



Spirit Island

Courtesy Minnesota Historical Society

When the Franciscan priest Louis Hennepin viewed Spirit Island in 1680, its pyramidal peak rose out from the center of the Mississippi River's St. Anthony Falls. One hundred seventy years later, as white settlers began building Minneapolis, the island sat about 1,000 feet downriver of the receding falls. By 1960, Spirit Island had vanished altogether.

Despite its shifting position in relation to the falls, Spirit Island was long a constant presence in the Mississippi, the home of legend. Fredrika Bremer, a Swedish novelist who visited Minnesota in 1850, recorded the oft-told Dakota saga that may well have given the island its name: Ampota Sampa was happy with her Dakota family of husband and two children. One day, however, the husband introduced a second wife into the family. Struck

with grief, Ampota Sampa placed the children into a canoe and piloted it over the edge of St. Anthony Falls. "Their bodies were never seen again," Bremer wrote, "but tradition says that on misty mornings the spirit of the Indian wife, with the children folded to her bosom, is seen gliding in the canoe through the rising spray about the Spirit Island, and that the sound of her death-song is heard moaning in the wind and in the roar of the Falls of St. Anthony."

Though Spirit Island—one of a group of Mississippi islands below the falls that also included Meeker, Cataract and Upton islands—never had much commercial value, white settlement led to its dismemberment and destruction. In 1854 the federal government deeded the island to George W. Allen, who two years later

sold it for \$1,000. At this time a rocky isle scattered with hemlock and spruce trees and occupied by a family of eagles, Spirit Island passed through many hands, ending up in ownership of the St. Anthony Water power Company (Northern States Power's predecessor) in 1882. Mill-bound logs tumbling over the falls hacked away at the island's edge, and the quarrying of its limestone further reduced its height and length.

NSP returned the island to the federal government in 1957. With the Minneapolis upper-harbor project underway in the late 1950s and early '60s, Spirit Island was blocking the approach of boats to the new St. Anthony Falls navigation dock. The Corps of Engineers completely removed the island from the river channel in 1960.

Jack El-Hai

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